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FIG.1A  
PRIOR ART

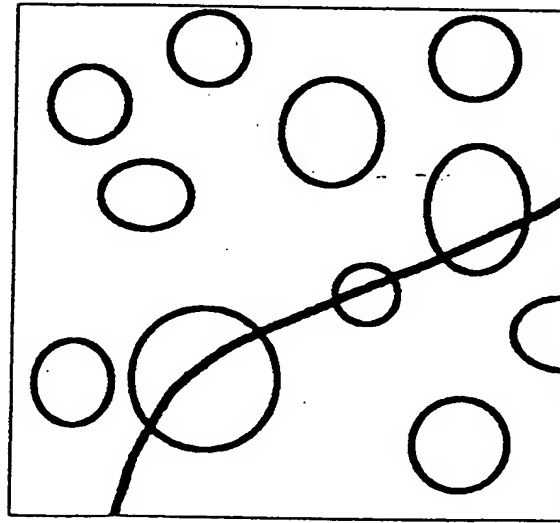


FIG.1B  
PRIOR ART

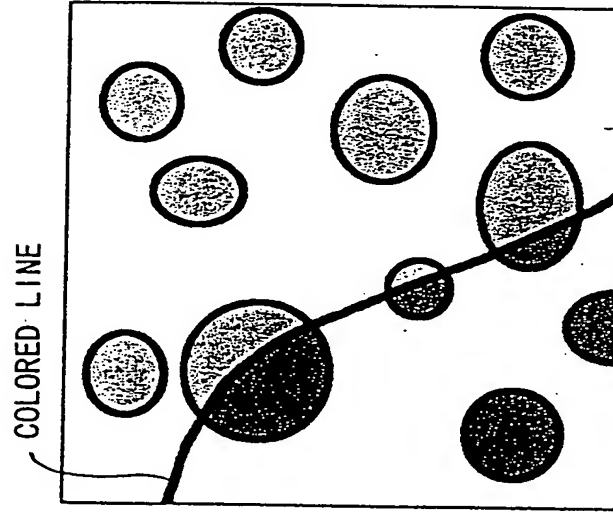
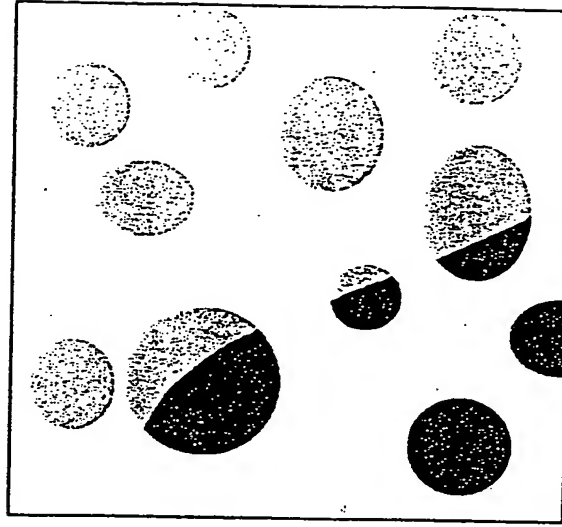


FIG.1C  
PRIOR ART



APPLYING PAINT BUCKET TOOL

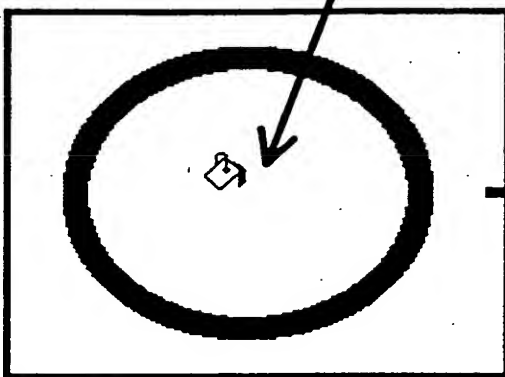


FIG.2A PRIOR ART

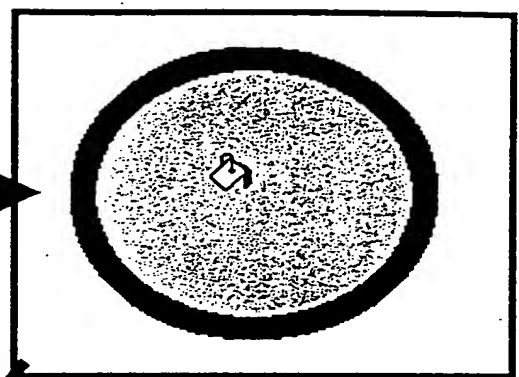


FIG.2B PRIOR ART

1. APPLYING PAINT BUCKET TOOL ON  
COLORED LINE

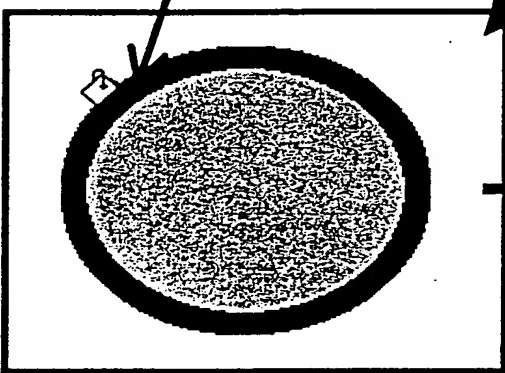


FIG.2C PRIOR ART

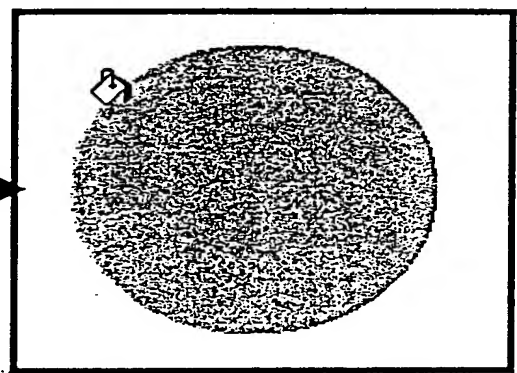


FIG.2D PRIOR ART

PERFORMING FILLING PROCESS WITH  
FUNCTION OF FILLING COLORED LINE  
INSIDE

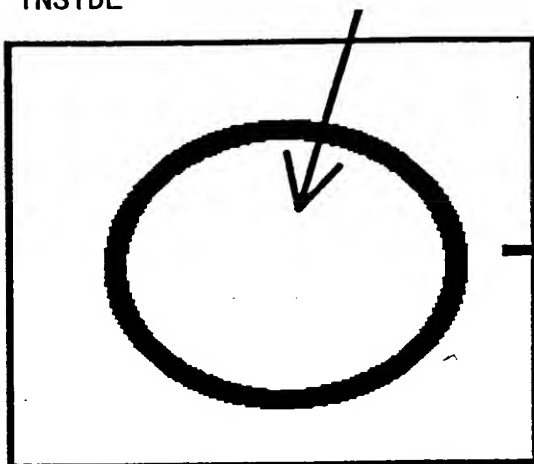


FIG.3A  
PRIOR ART

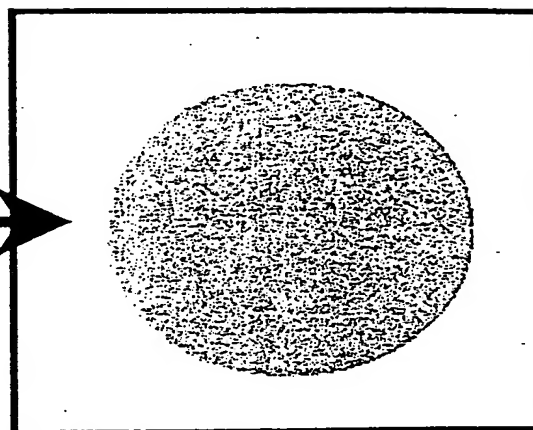


FIG.3B  
PRIOR ART

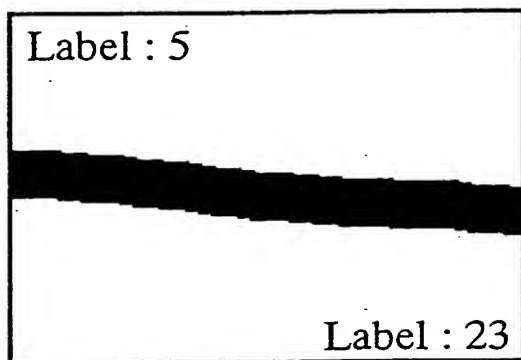


FIG.4A  
PRIOR ART

APPLIED FILTER SIZE

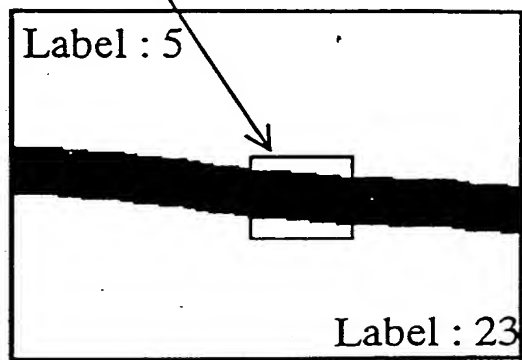


FIG.4B  
PRIOR ART

LABEL NUMBER IS 23

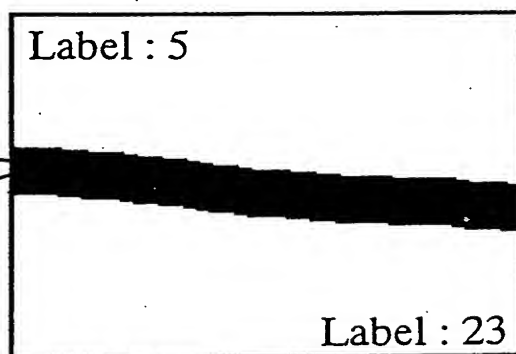


FIG.4C  
PRIOR ART

APPLYING PAINT BUCKET TOOL ON  
COLORED LINE

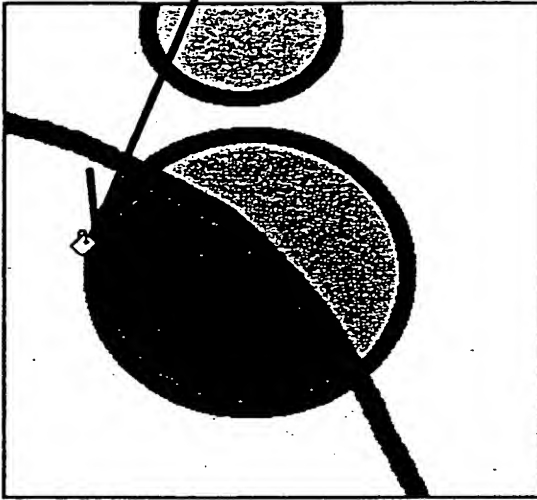


FIG.5A  
PRIOR ART

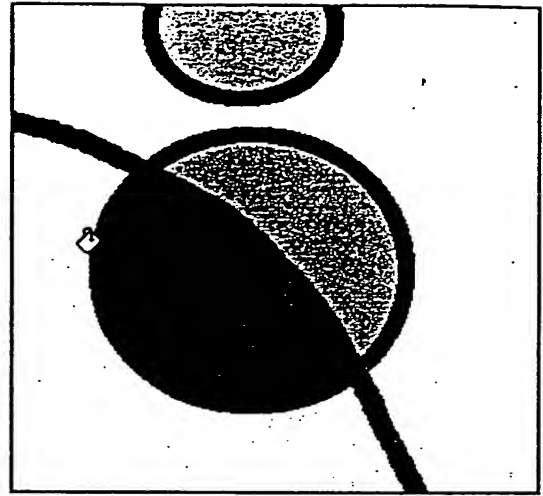


FIG.5B  
PRIOR ART

1. SPECIFY REGION FOR APPLYING  
PAINT BUCKET TOOL

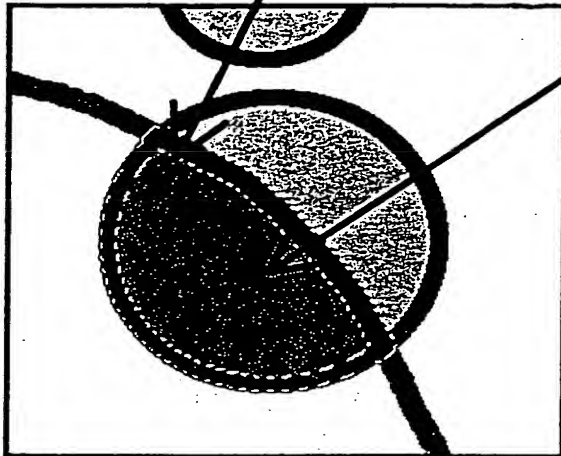


FIG.6A  
PRIOR ART

2. APPLY PAINT BUCKET TOOL  
WITHIN THE REGION

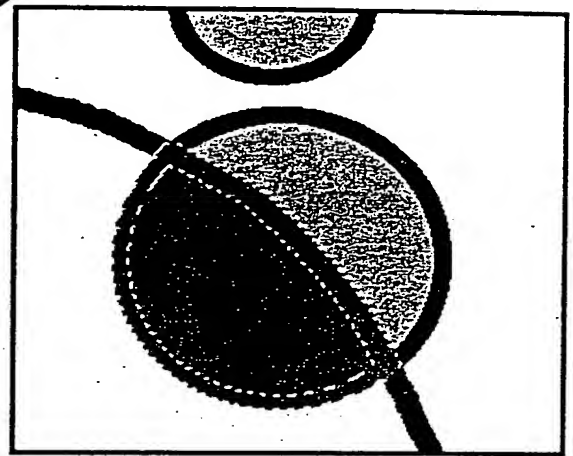
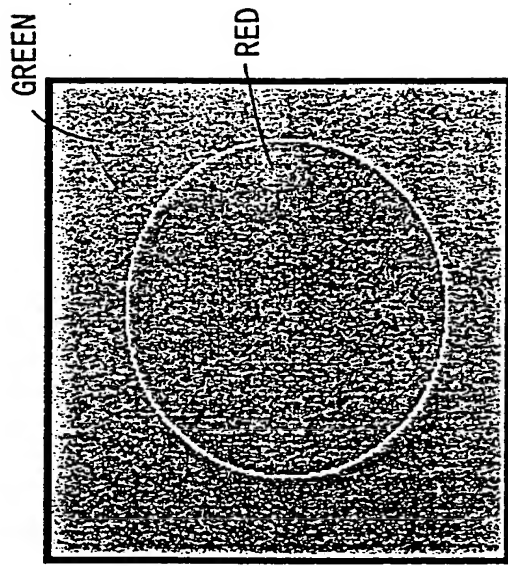
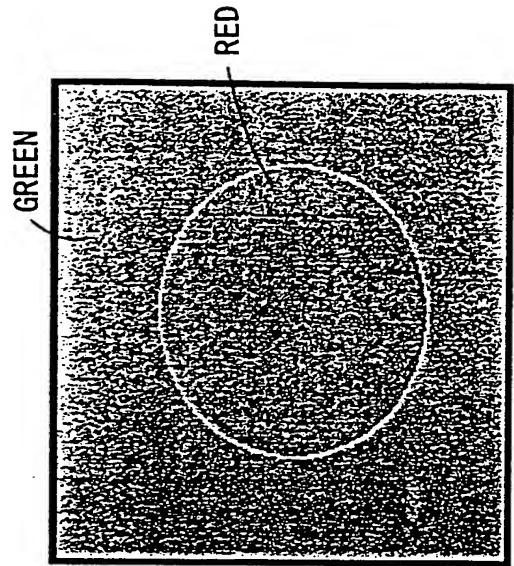


FIG.6B  
PRIOR ART

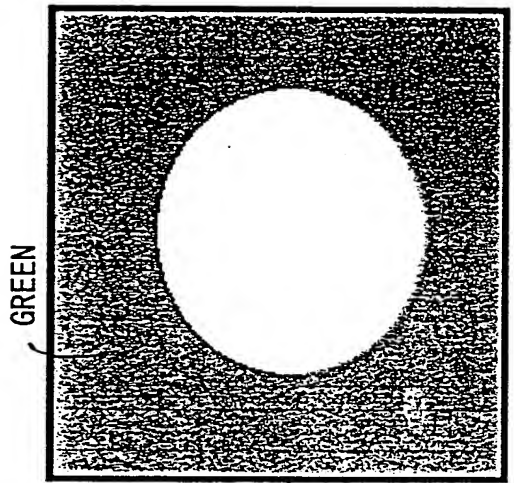
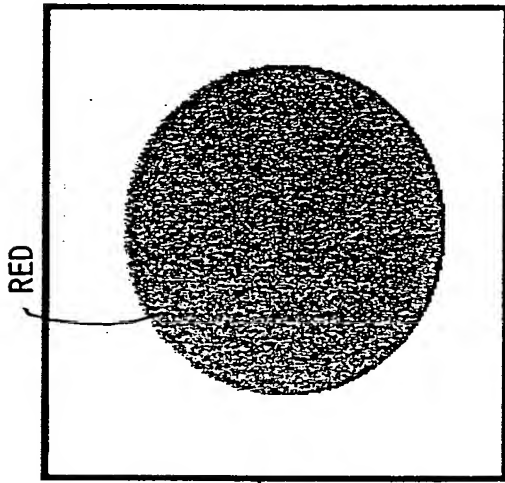
FIG.7  
PRIOR ART



FILLING INSIDE FIRST



FILLING OUTSIDE FIRST



WHEN USING FILLING TOOL WITH  
FUNCTION OF FILLING COLORED LINE

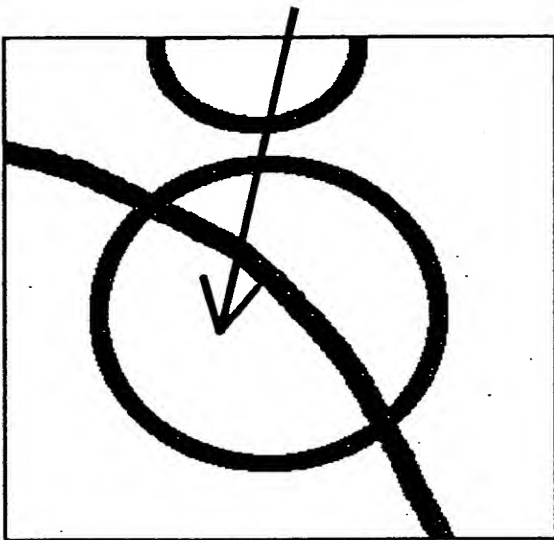


FIG.8A  
PRIOR ART

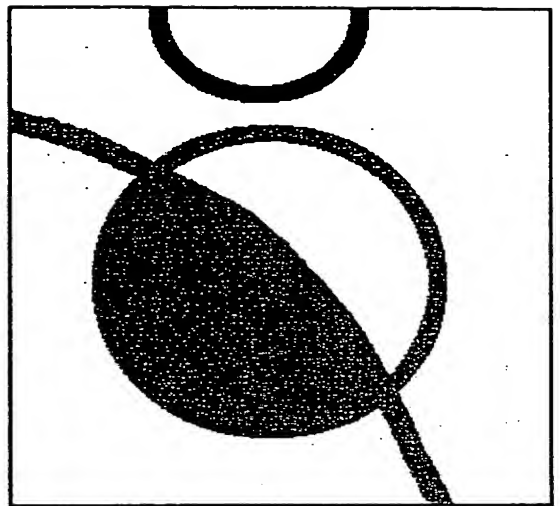


FIG.8B  
PRIOR ART

1. SELECT REGION TO BE AFFECTED

2. FILL INSIDE BY FILLING TOOL  
WITH FUNCTION OF FILLING  
COLORED LINE

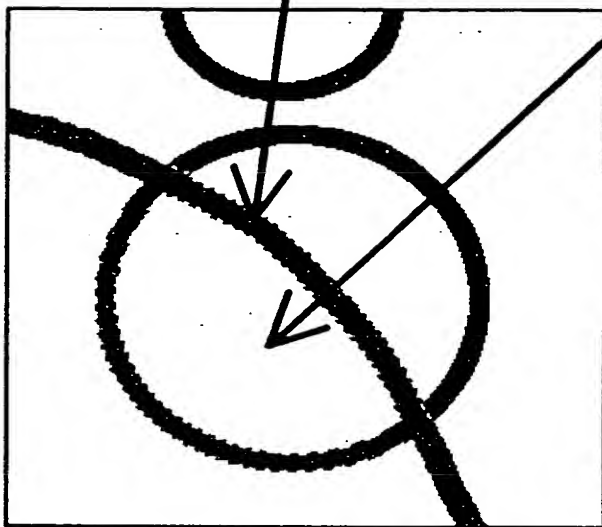


FIG.9A  
PRIOR ART

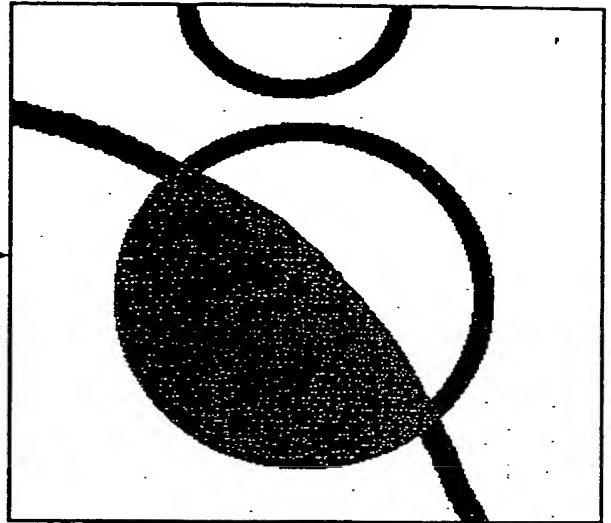
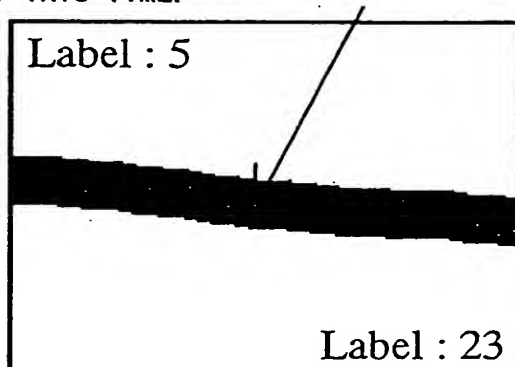


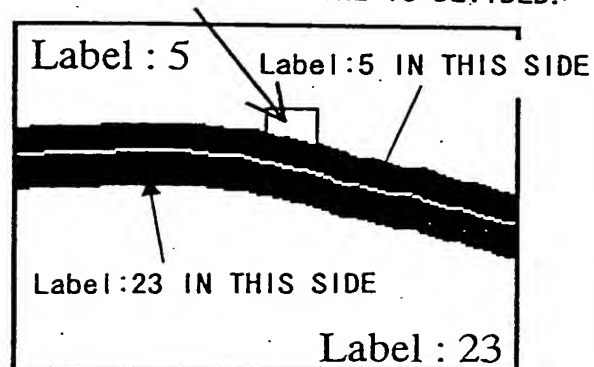
FIG.9B  
PRIOR ART

LABEL OF THIS COLORED LINE BECOMES 23.  
HOWEVER, IT IS NOT KNOWN WHICH NUMBER 5  
OR 23 IS ASSIGNED TO DARKER COLOR  
AT THIS TIME.



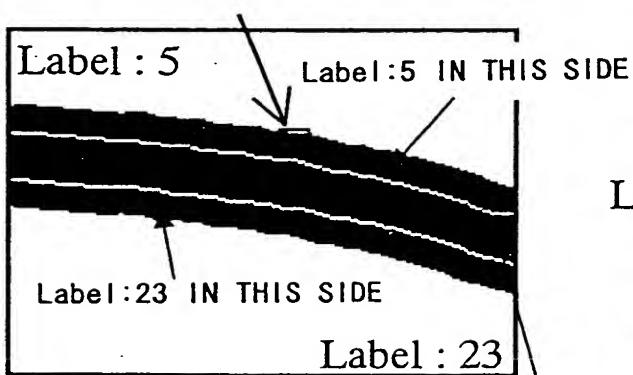
**FIG.10A  
PRIOR ART**

IF FILTER SIZE IS SMALL,  
THE COLOR OF THE LINE IS DEVIDED.



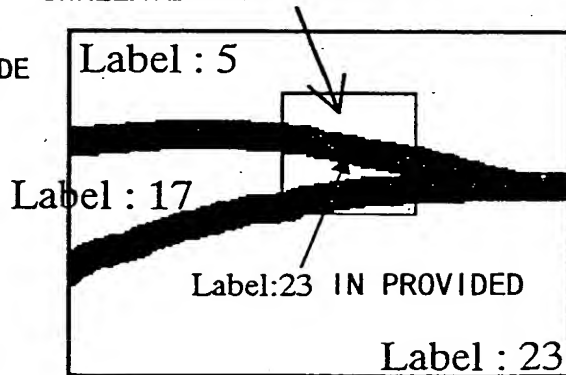
**FIG.10B  
PRIOR ART**

IF FILTER SIZE IS FURTHER SMALLER,  
THE PART OF THE COLORED LINE REMAINS.



**FIG.10C  
PRIOR ART**

IF FILTER SIZE IS LARGE, LABEL OF  
UNRELATED COLSED AREA IS ADDED.



**FIG.10D  
PRIOR ART**

THIS PART OF COLORED LINE  
REMAINS UNCHANGED

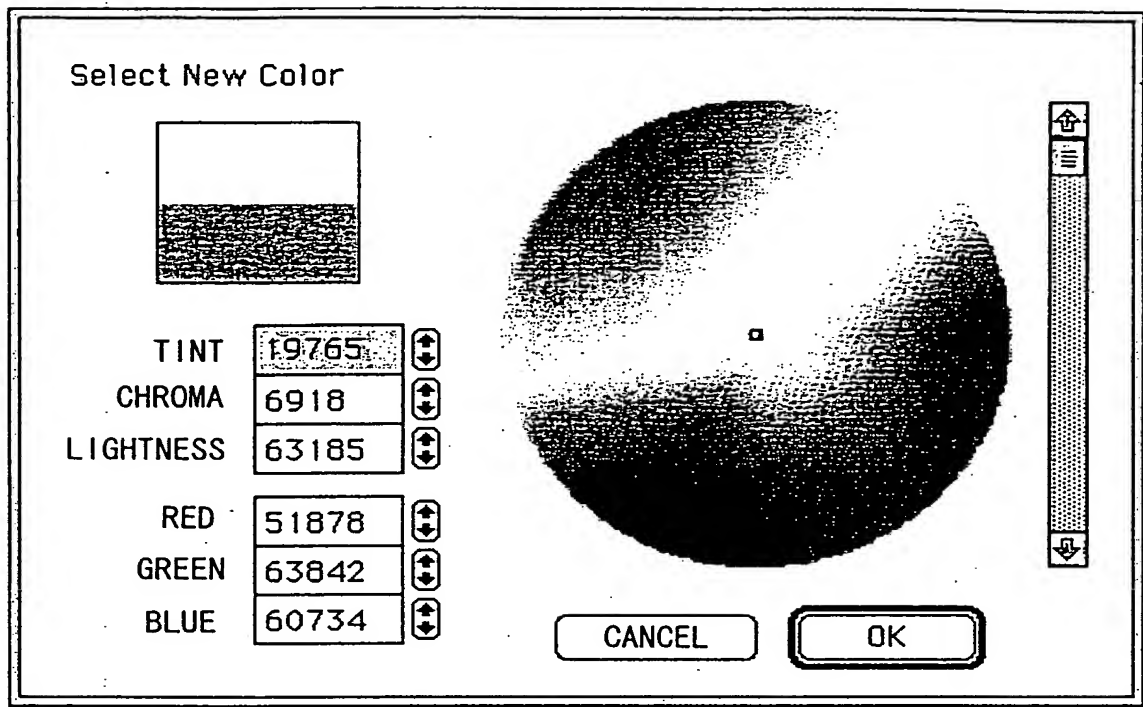


FIG.11A PRIOR ART

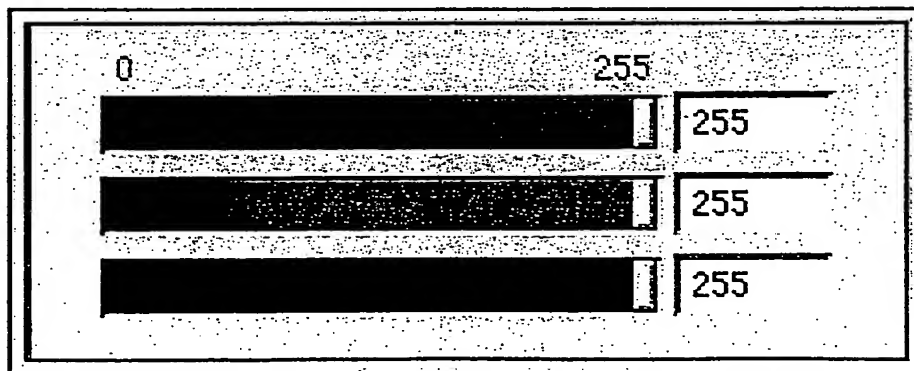


FIG.11B PRIOR ART

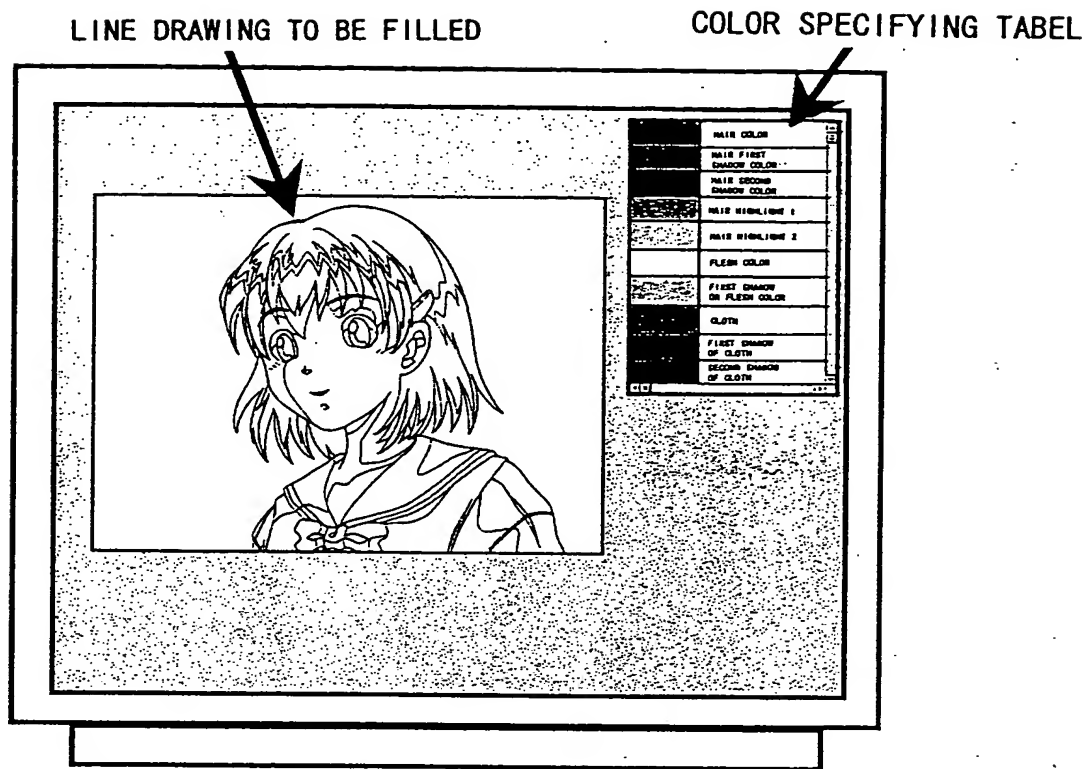


FIG.12A PRIOR ART

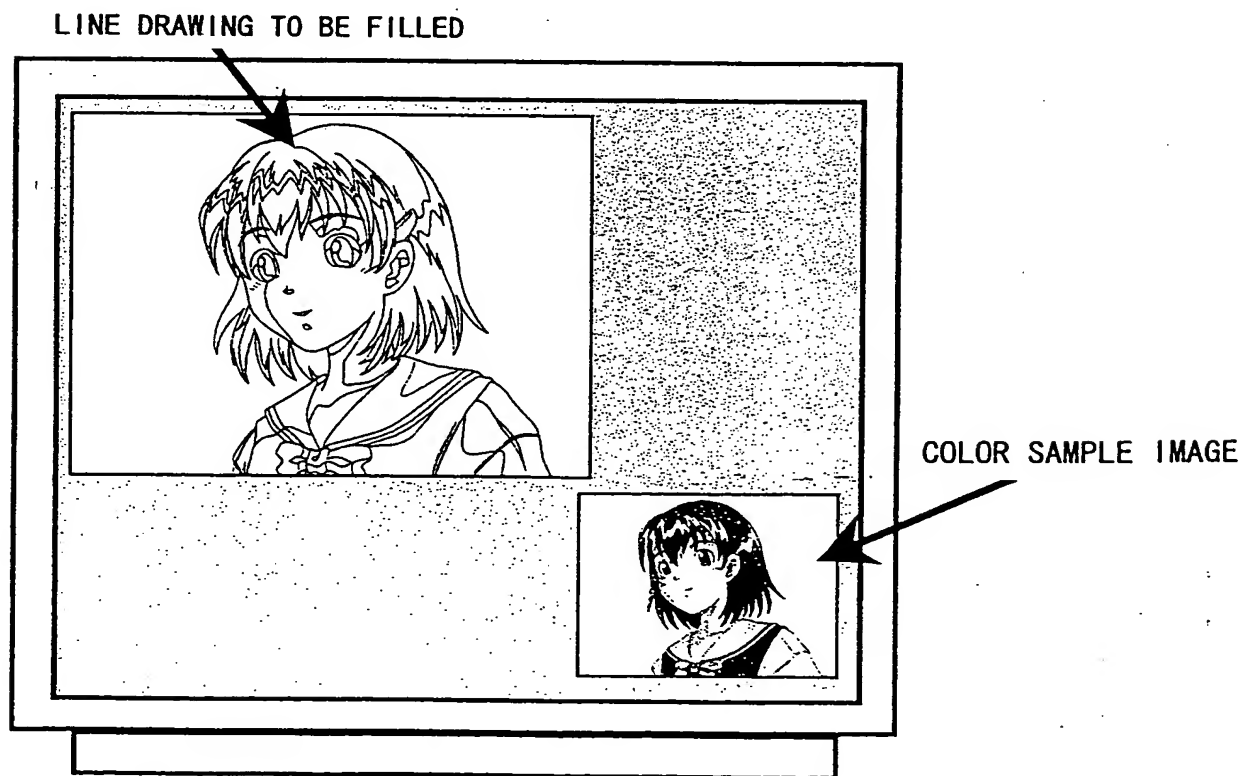
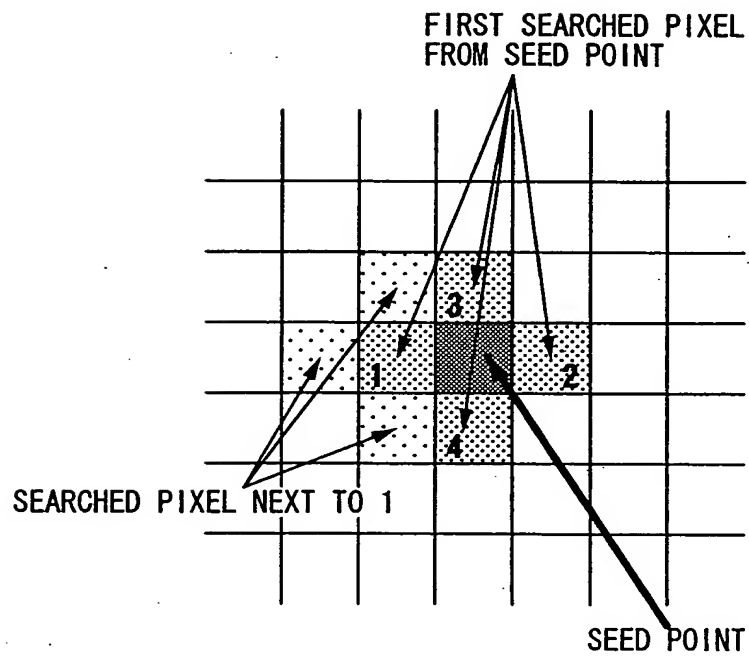
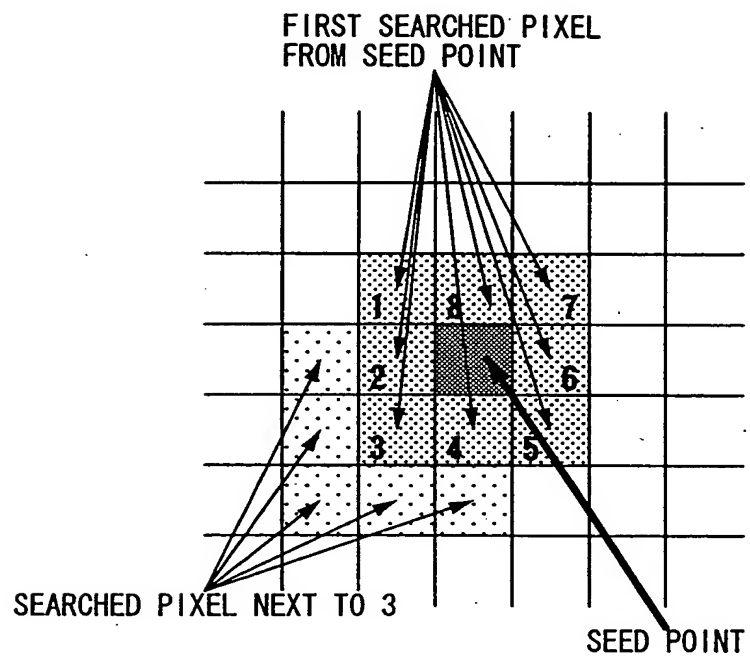


FIG.12B PRIOR ART

# F I G. 1 3 P R I O R A R T

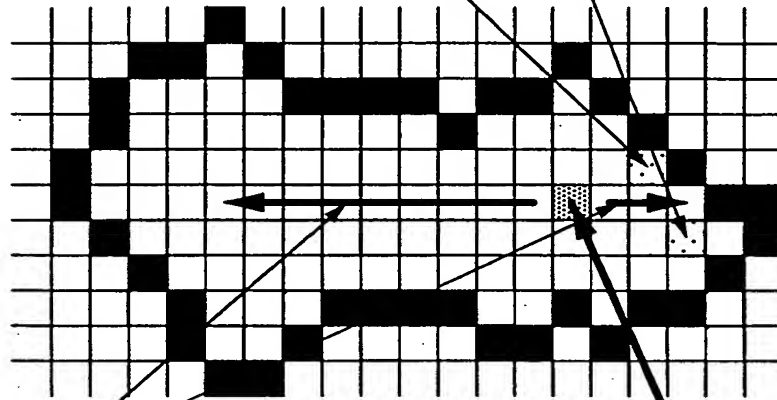


# FIG. 14 PRIOR ART



# FIG. 15 PRIOR ART

2. PERFORM PROCESSING OF 1 RECURSIVELY  
BY USING PIXEL SEARCHED BY 1 AS NEW SEED POINT



1. SEARCH RIGHT AND LEFT

SEED POINT

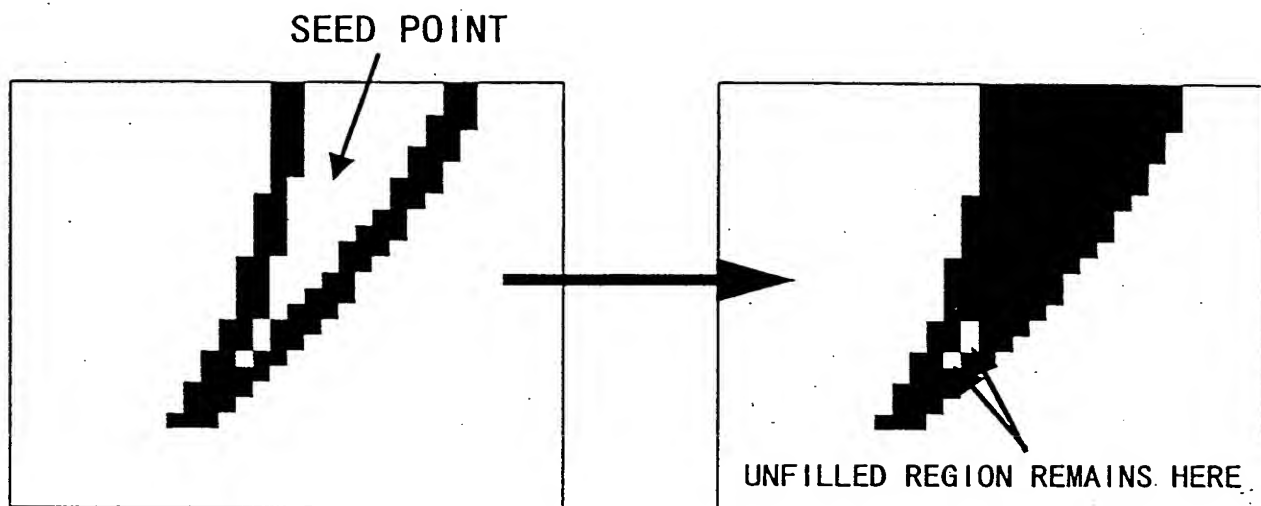


FIG.16A  
PRIOR ART

FIG.16B  
PRIOR ART

FIG.17  
PRIOR ART

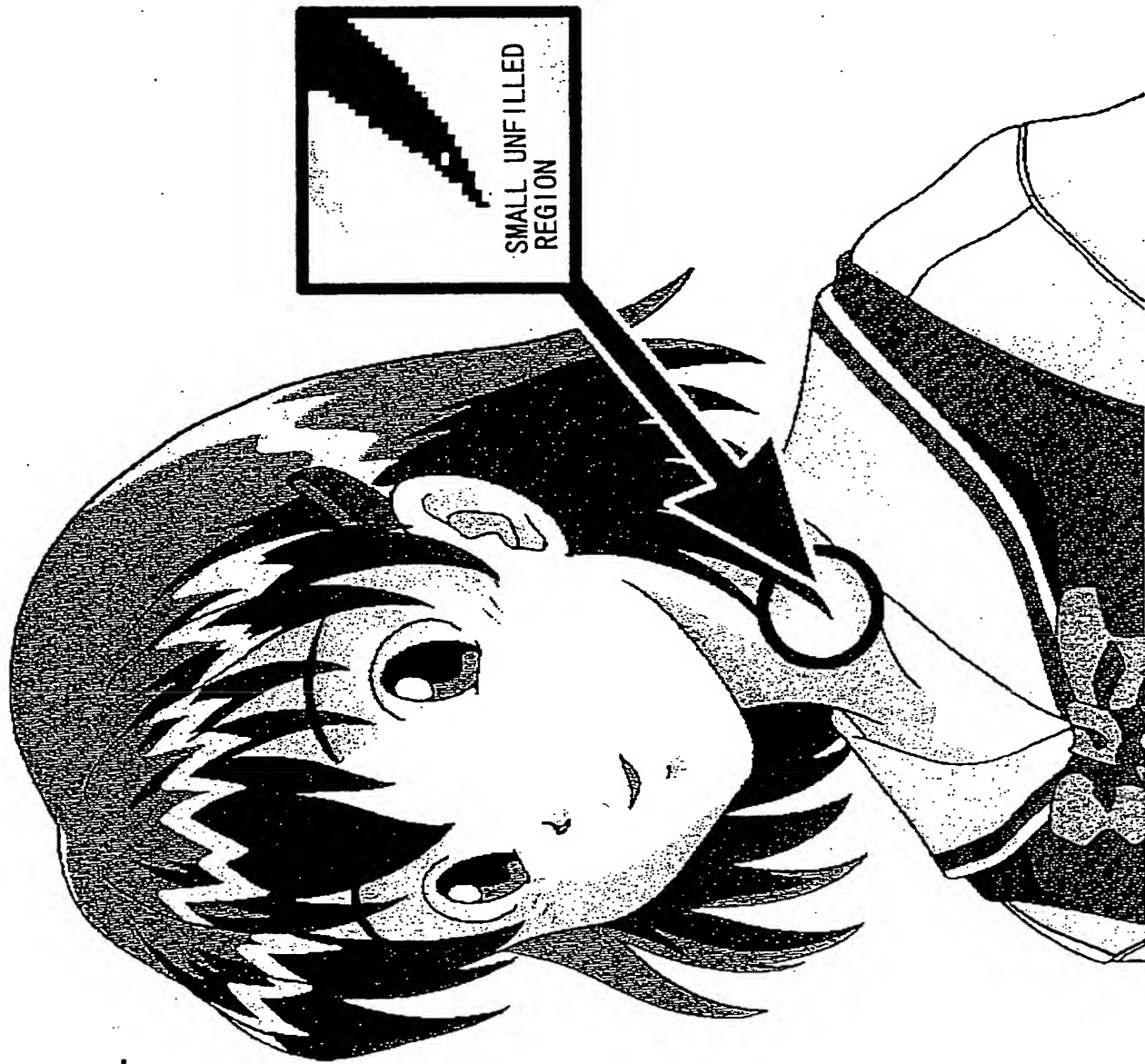
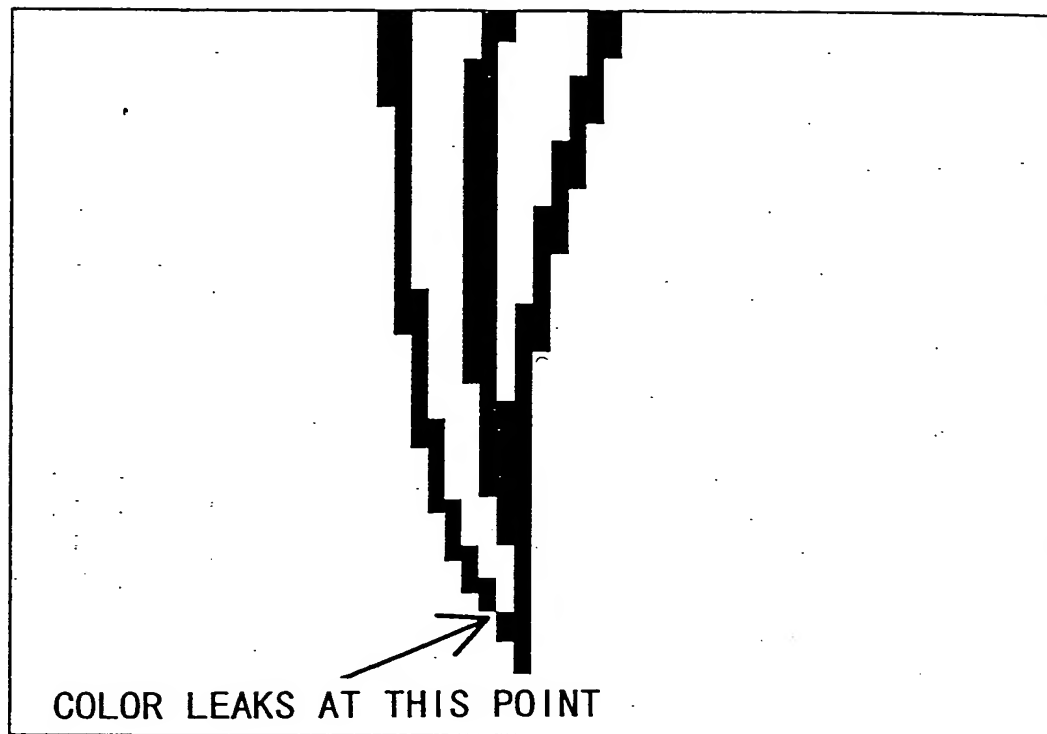


FIG.18 PRIOR ART



# FIG. 19

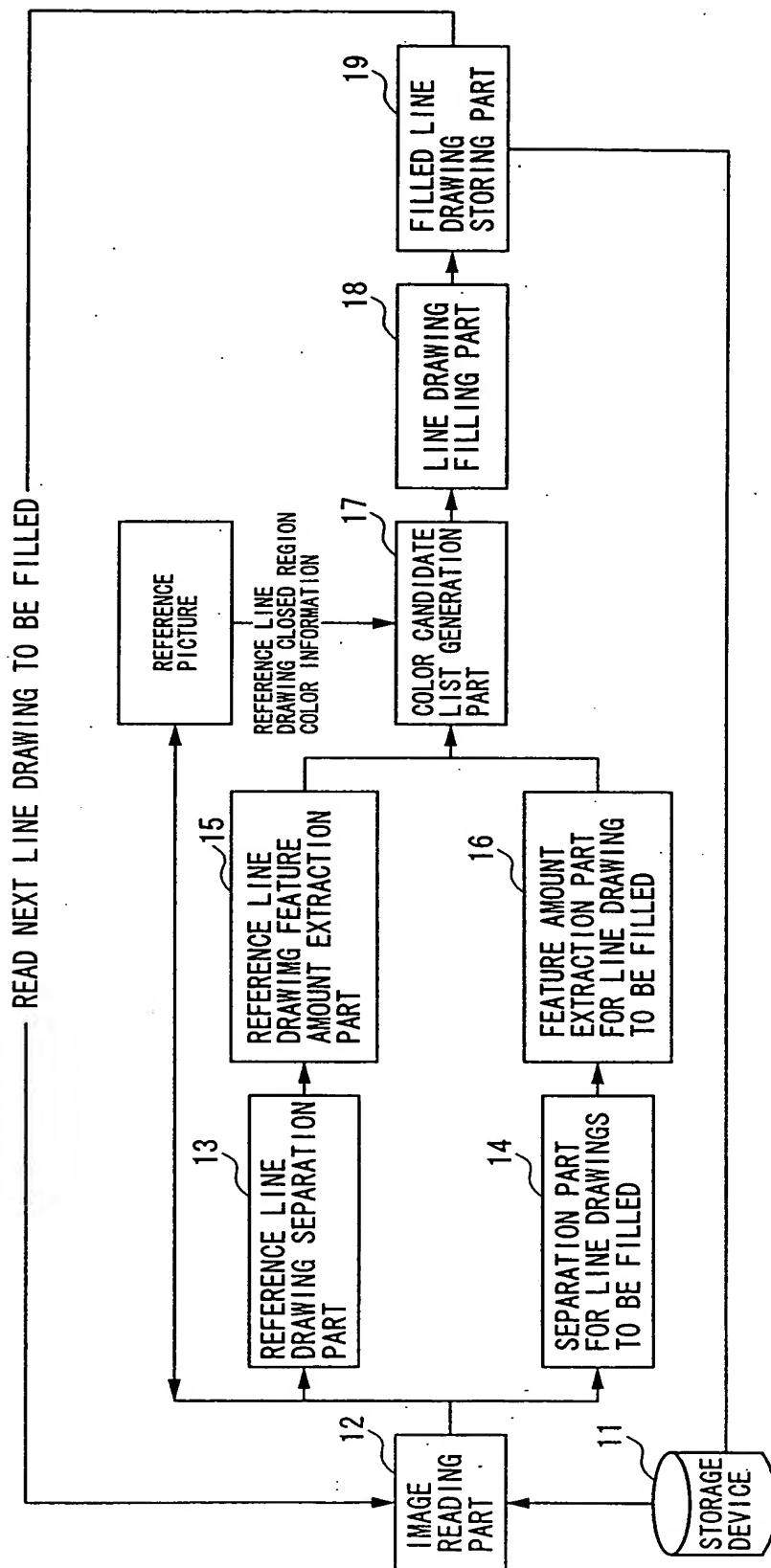
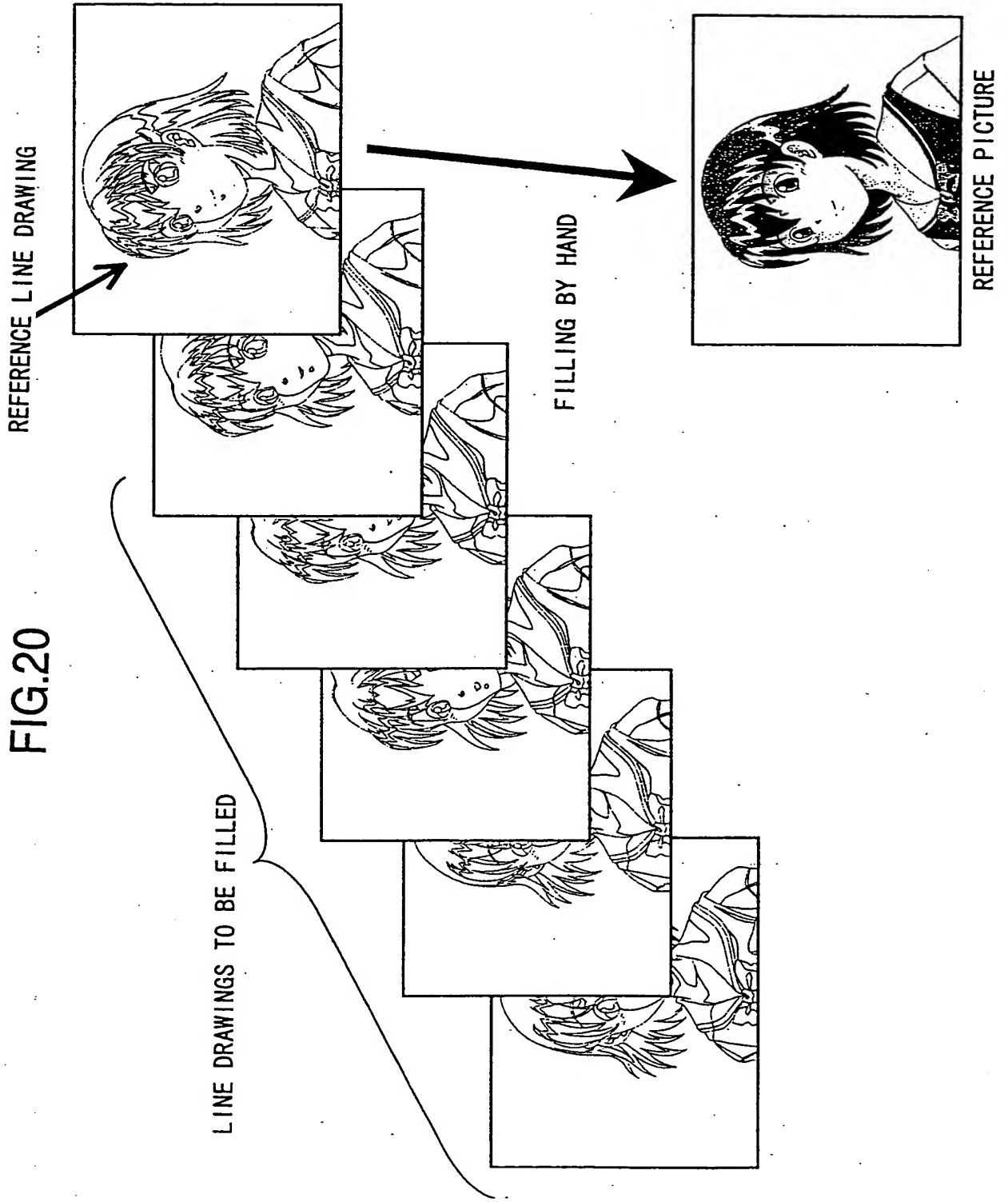
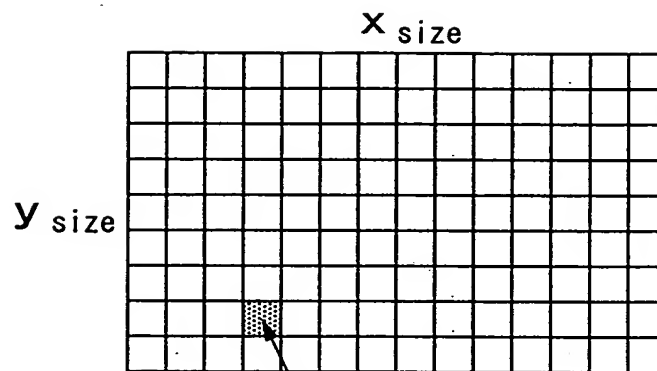


FIG.20

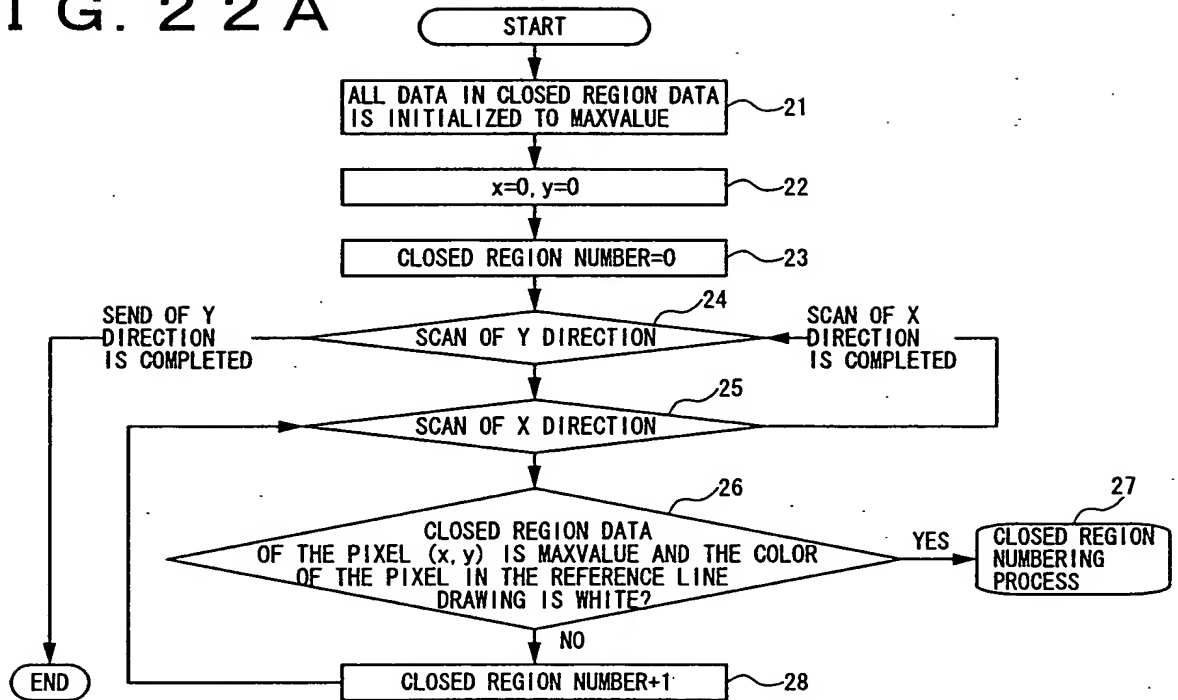


**F I G. 2 1**

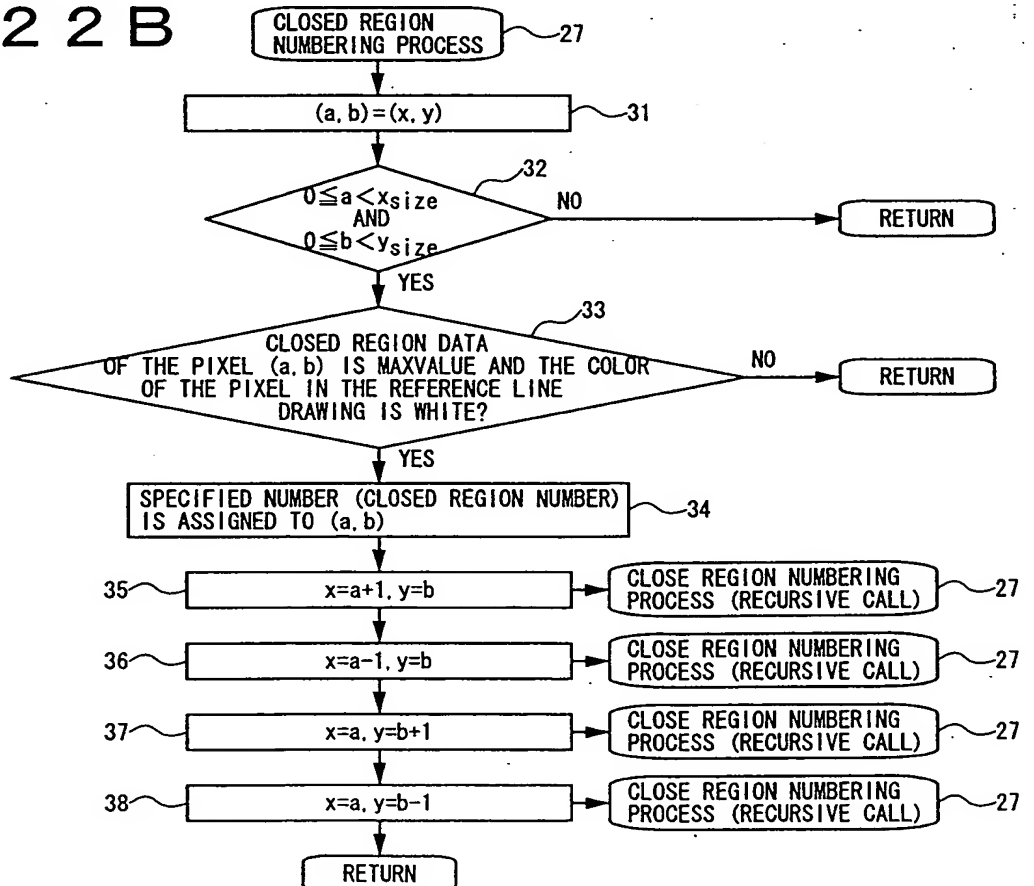


CLOSED REGION NUMBER IS ASSIGNED  
TO EACH PIXEL  
(MAXIMUM NUMBER IS ASSIGNED TO  
BOUNDARY LINE PIXEL)

# FIG. 22A



# FIG. 22B



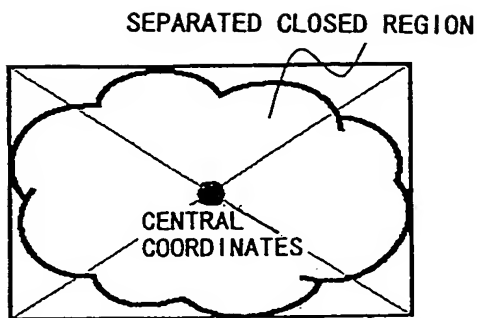


FIG. 23A MINIMUM RECTANGULAR CIRCUMSCRIBING CLOSED REGION

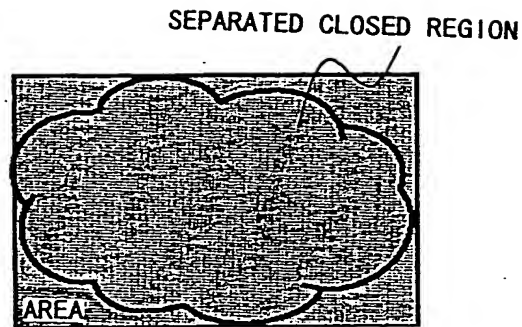


FIG. 23B MINIMUM RECTANGULAR CIRCUMSCRIBING CLOSED REGION

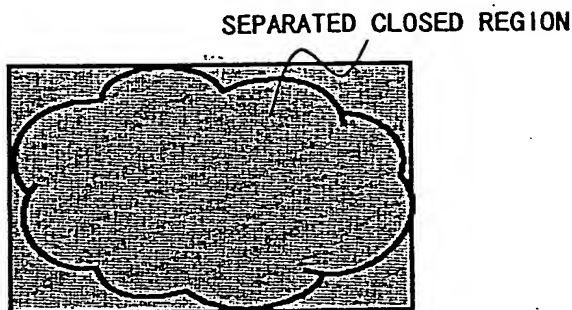


FIG. 23C MINIMUM RECTANGULAR CIRCUMSCRIBING CLOSED REGION

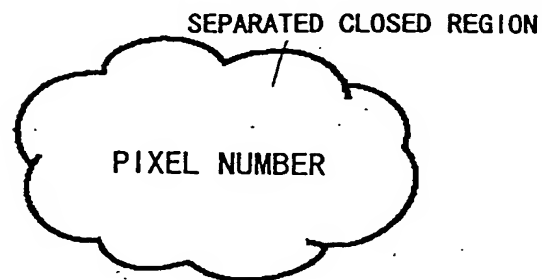


FIG. 23D

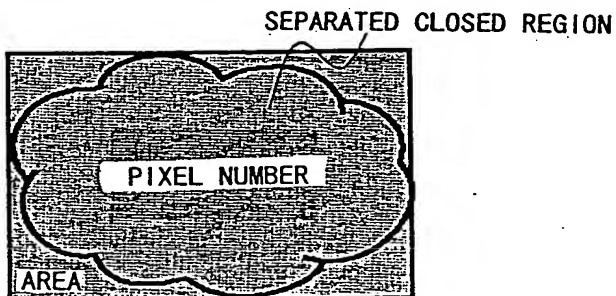


FIG. 23E MINIMUM RECTANGULAR CIRCUMSCRIBING CLOSED REGION

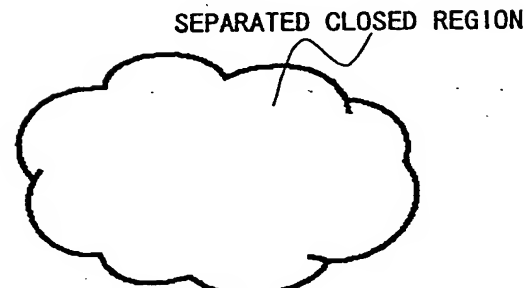


FIG. 23F

PERIPHERAL LENGTH

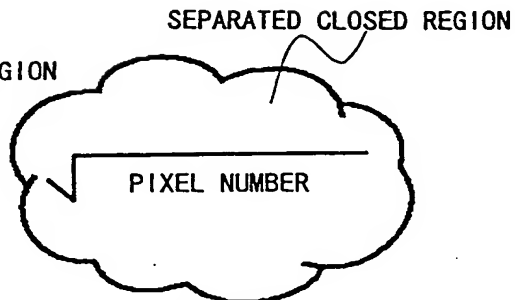
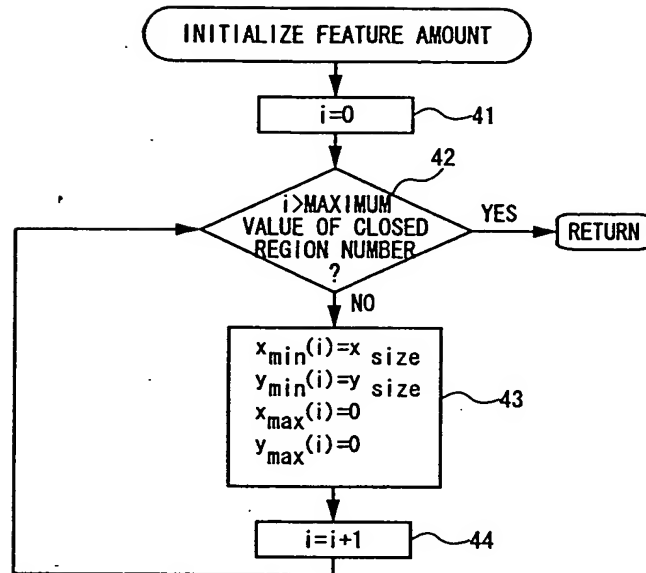
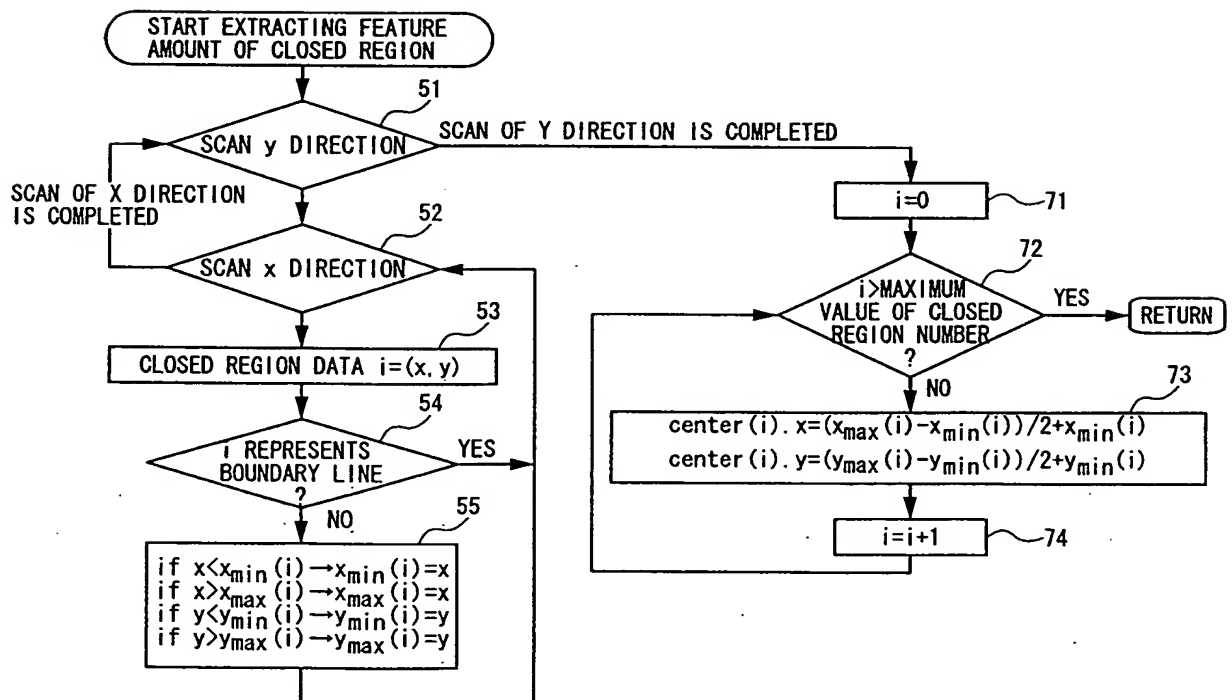


FIG. 23G PERIPHERAL LENGTH

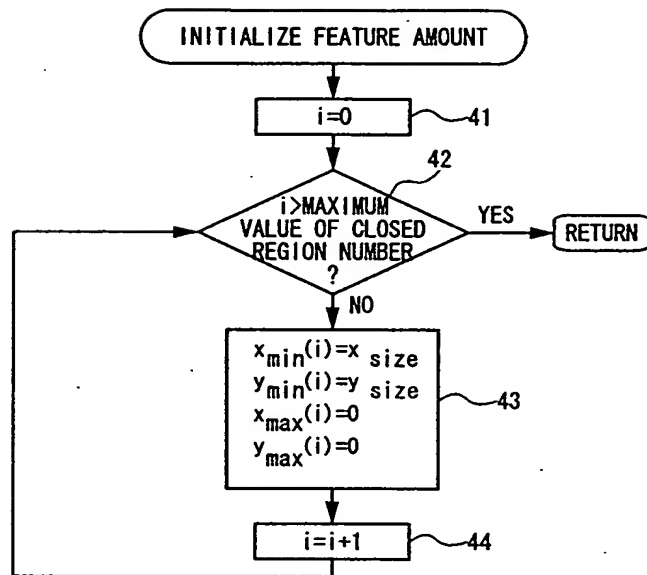
# FIG. 24A



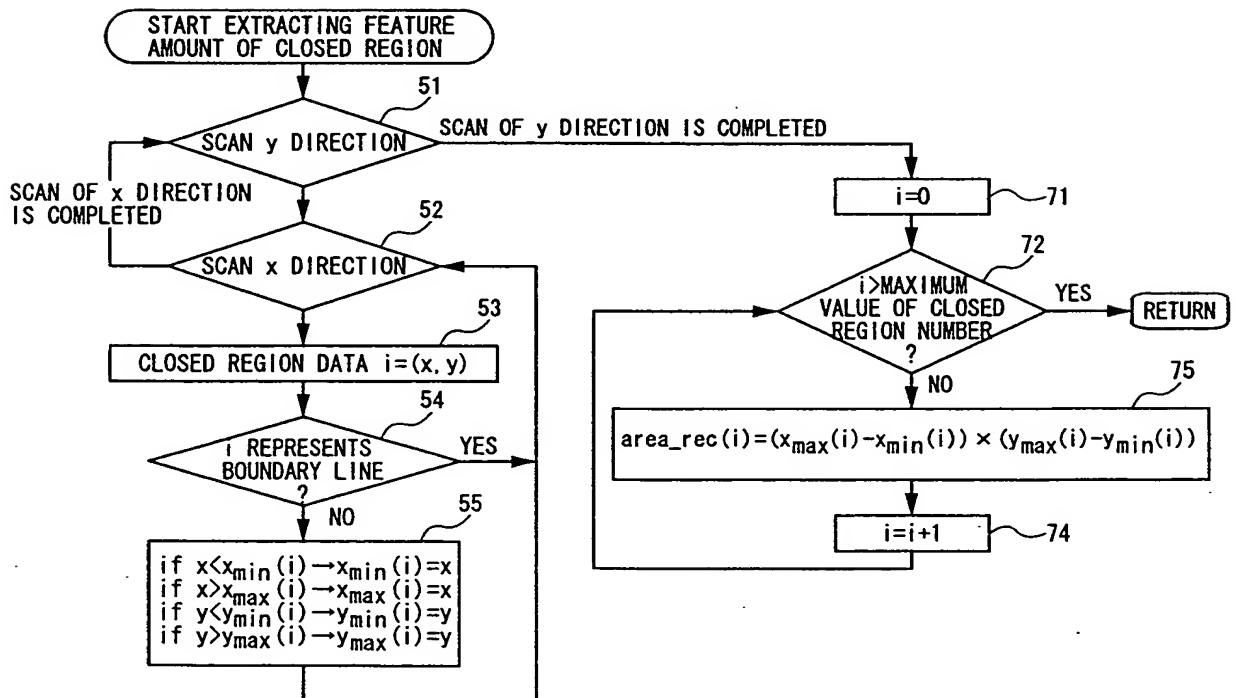
# FIG. 24B



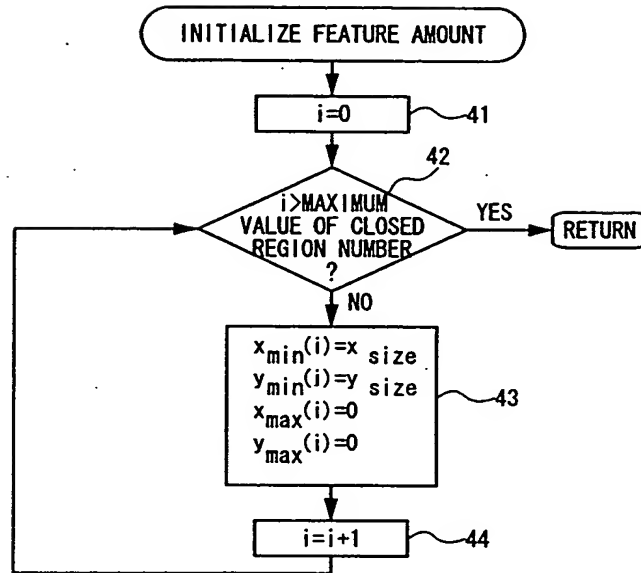
# FIG. 25A



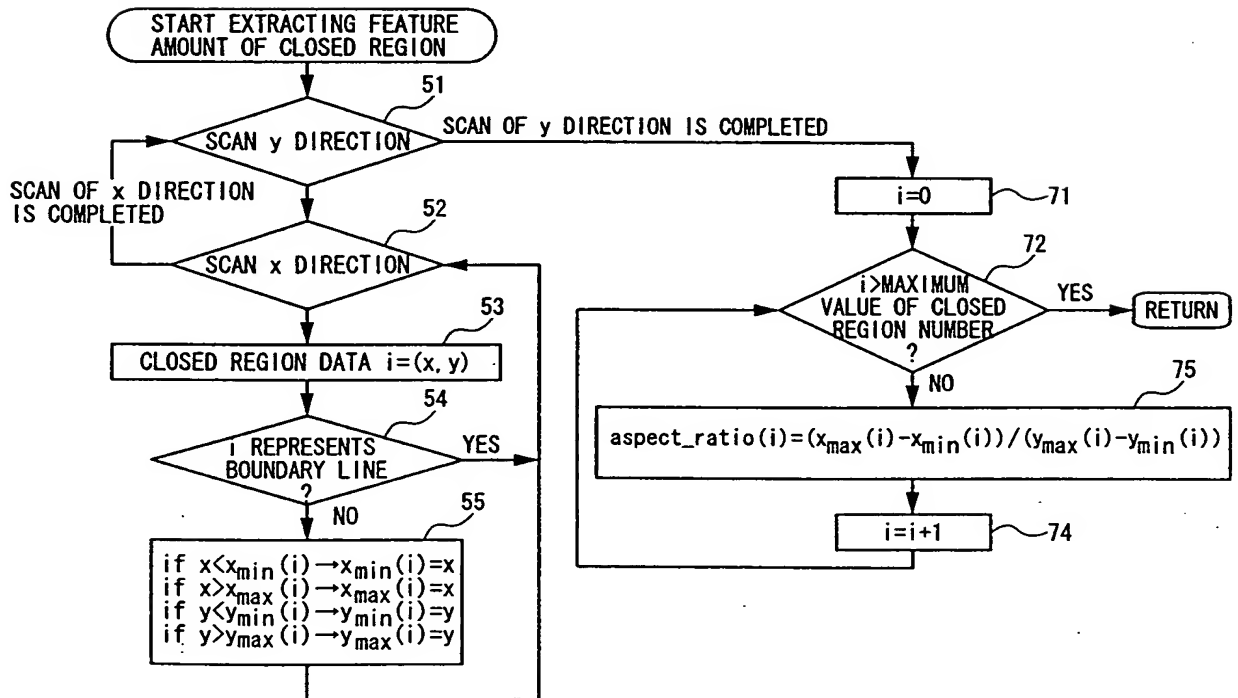
# FIG. 25B



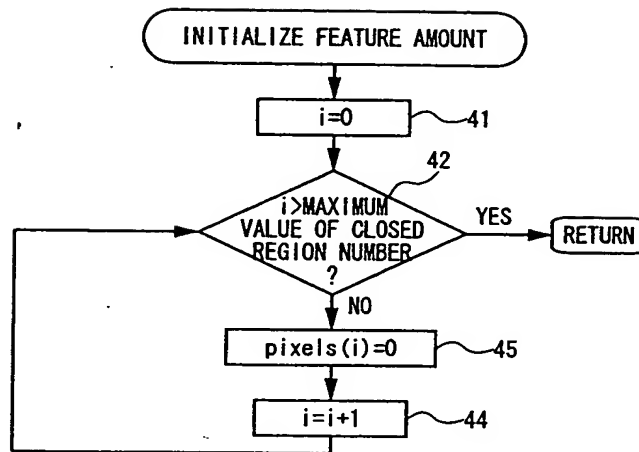
# FIG. 26A



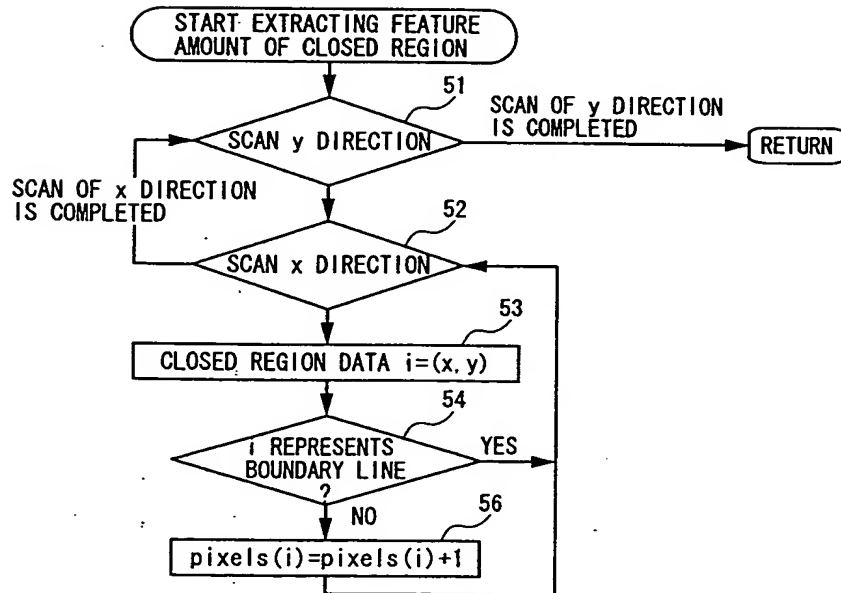
# FIG. 26B



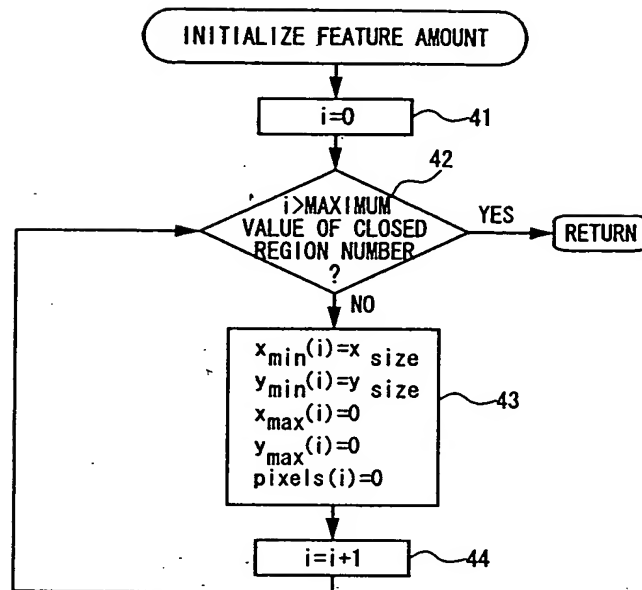
# FIG. 27A



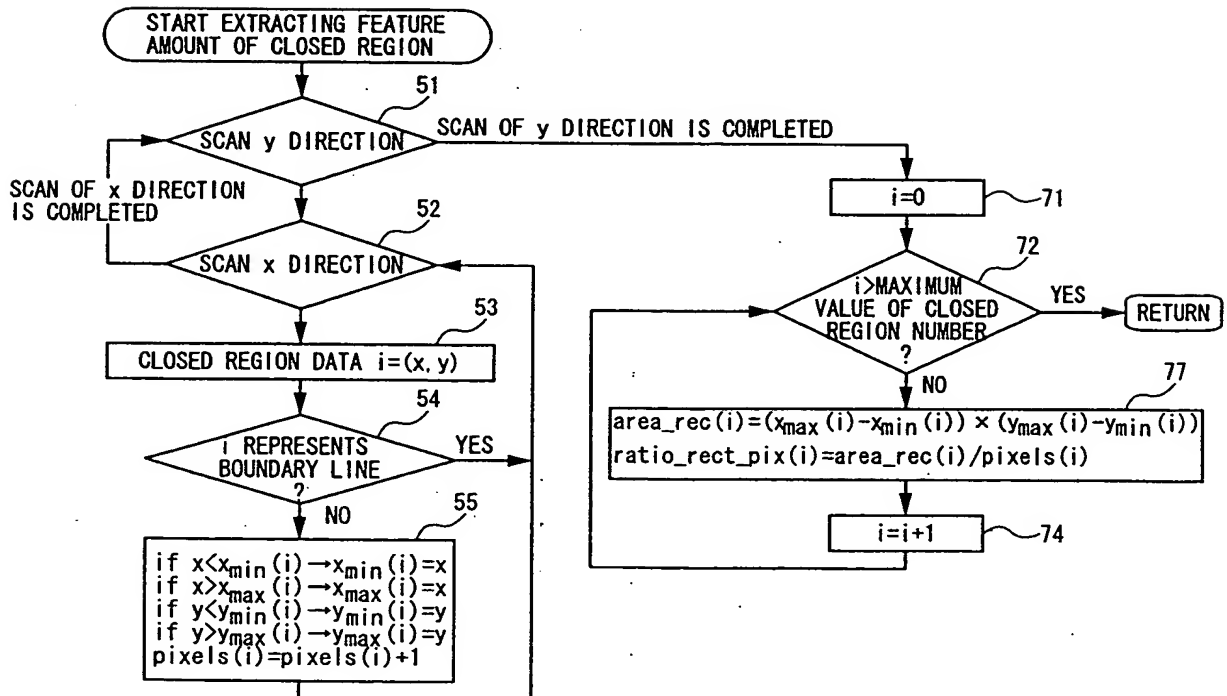
# FIG. 27B



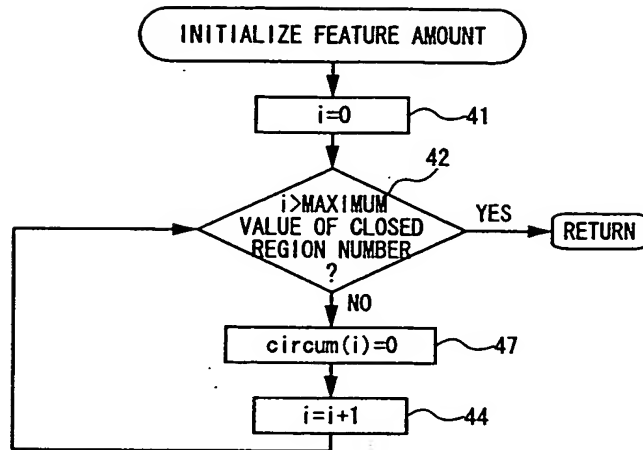
# FIG. 28A



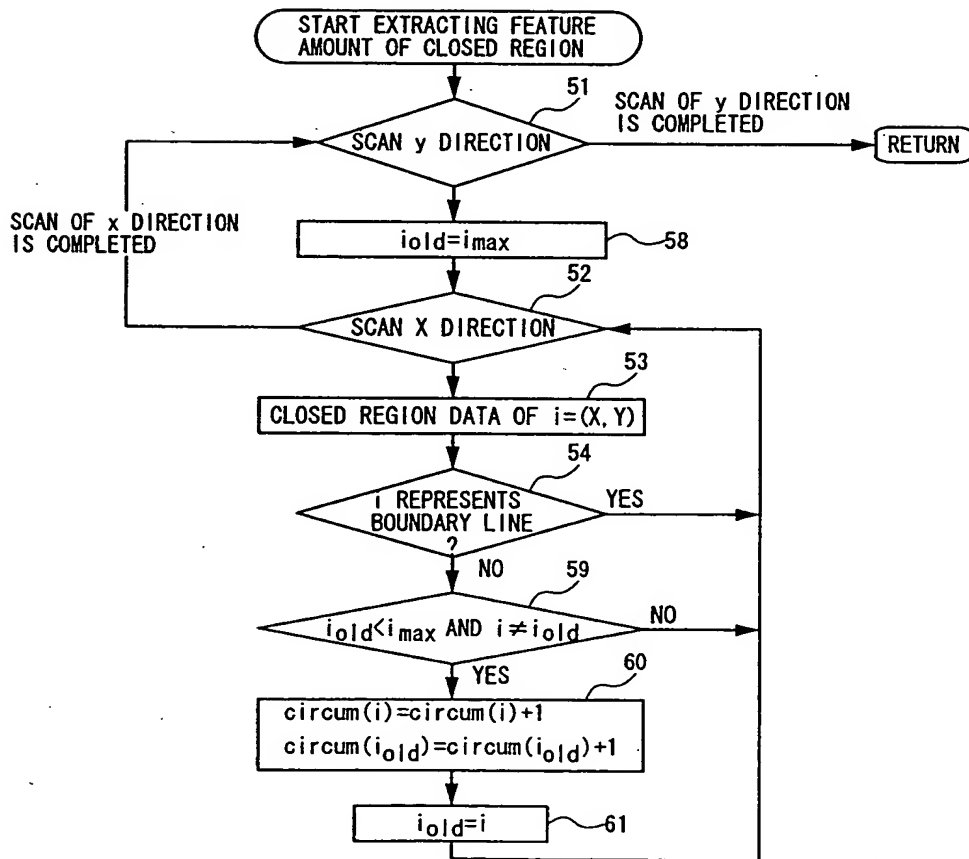
# FIG. 28B



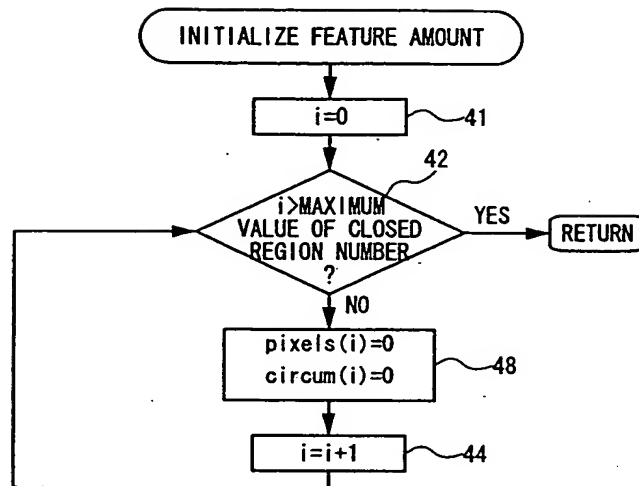
# FIG. 29A



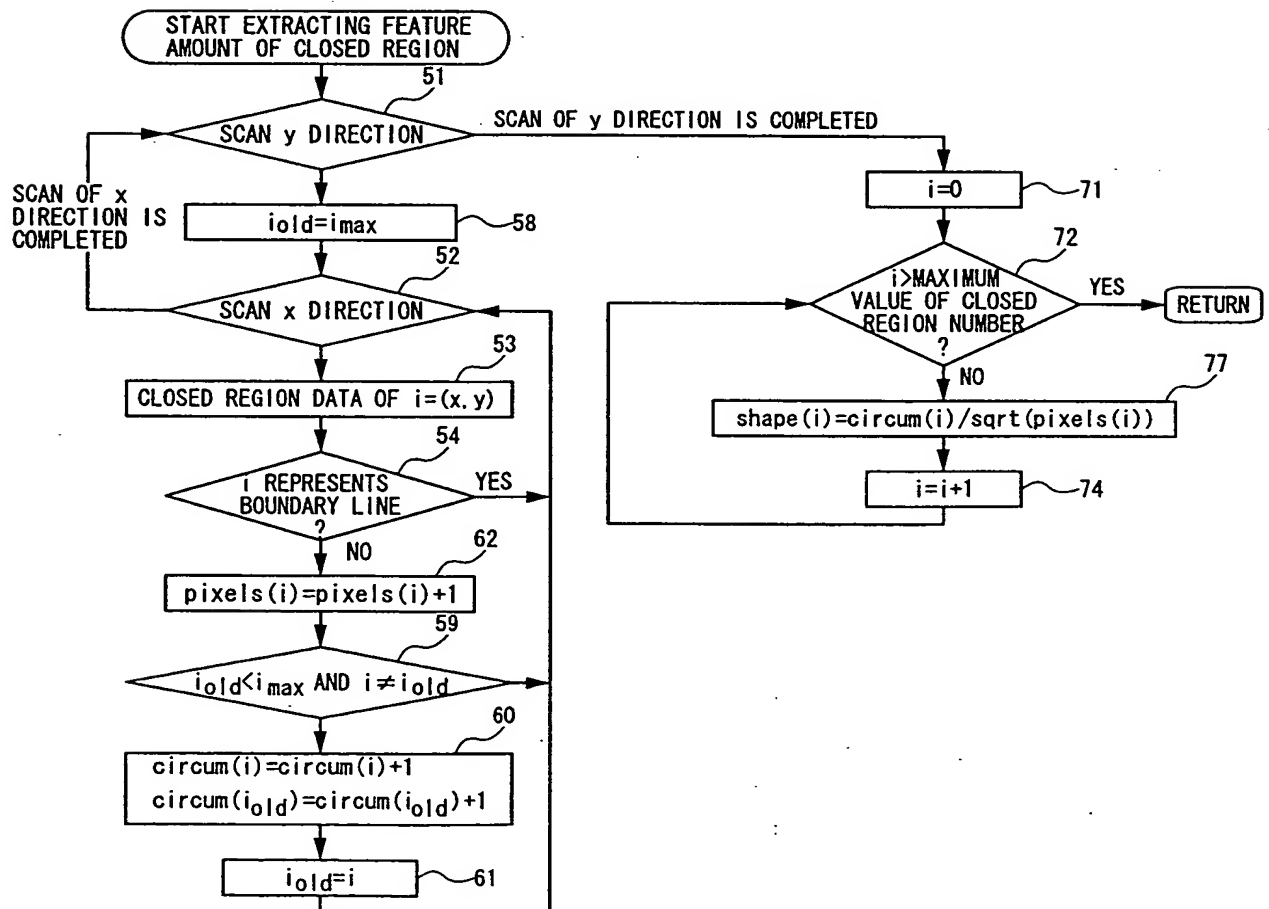
# FIG. 29B



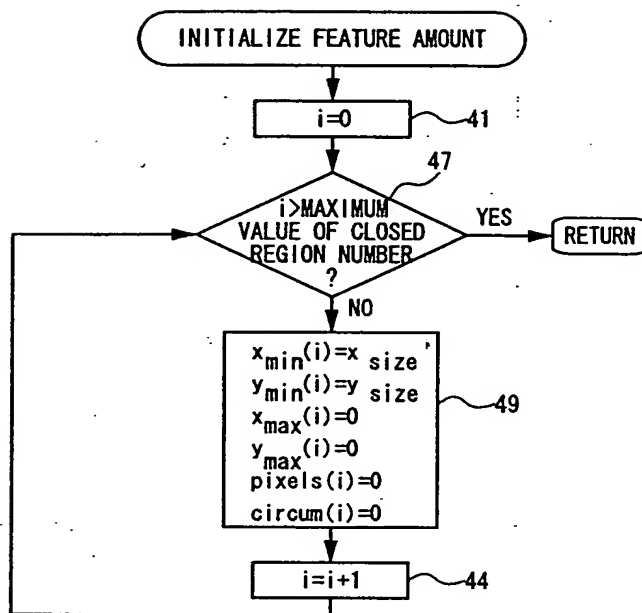
# FIG. 30A



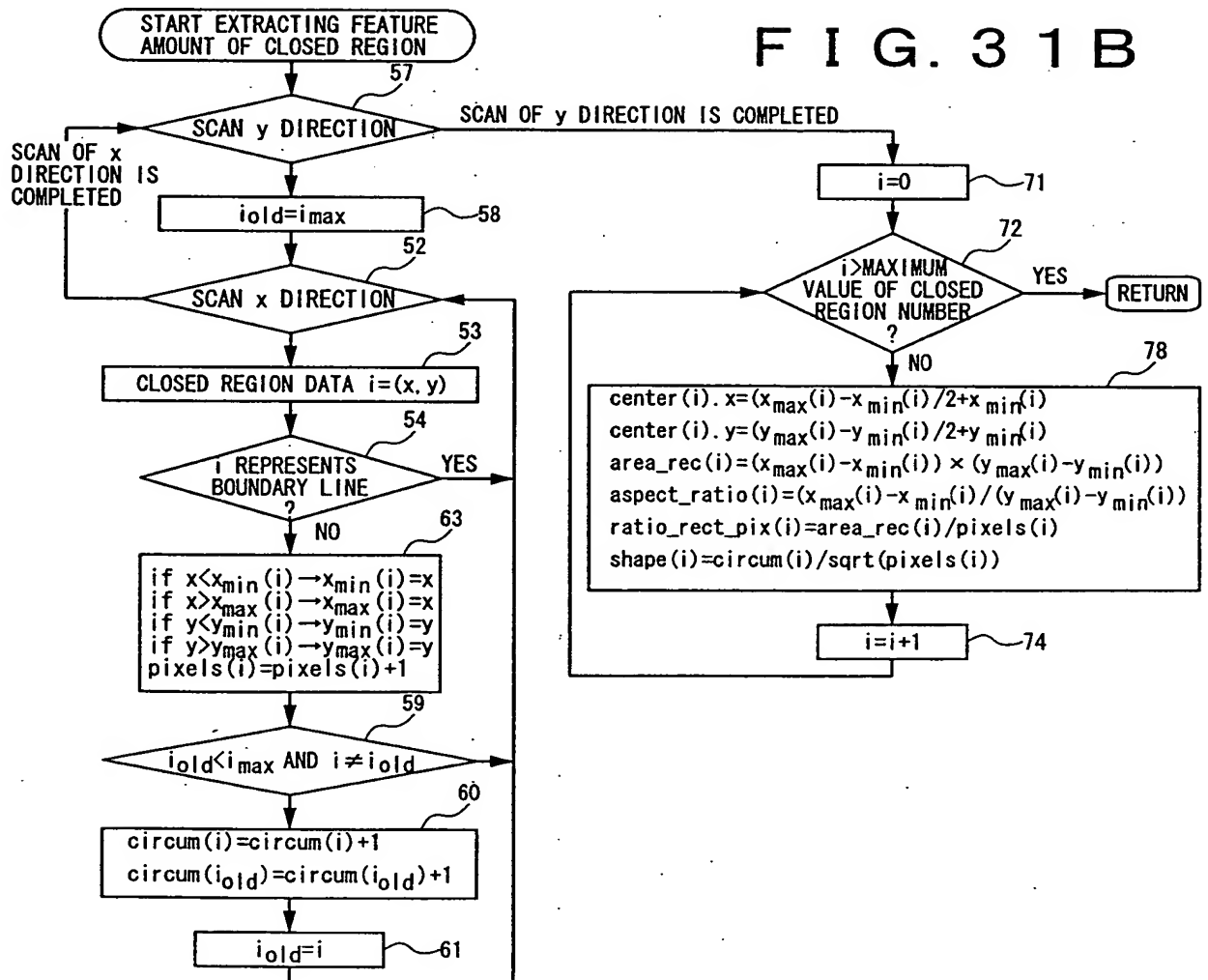
# FIG. 30B



# FIG. 31A



# FIG. 31B



# FIG. 32

REFERENCE LINE DRAWING					
CLOSED REGION NUMBER	FEATURE AMOUNT				
	1	2	3	4	5
1	( 53, 184)	1428	0.5492	1232	1.159
2	(186, 232)	11408	1.348	8462	1.348
3	(465, 339)	49698	1.268	32918	1.300
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.

# FIG. 33

LINE DRAWING TO BE FILLED	REFERENCE LINE DRAWING		
	FEATURE AMOUNT 1		...
CLOSED REGION NUMBER	CLOSED REGION NUMBER	VARIATION AMOUNT	...
0	0	0.000000	...
	1	30.41381	...
	2	31.62277	...
	3	42.05948	...
1	1	2.236068	...
	2	6.324555	...
	3	21.18962	...
	0	28.28427	...
2	1	6.324555	...
	2	12.20655	...
	3	25.80697	...
	0	33.83784	...
:	:	:	:

# FIG. 34

LINE DRAWING TO BE FILLED	REFERENCE LINE DRAWING		
	FEATURE AMOUNT 1		...
CLOSED REGION NUMBER	CLOSED REGION NUMBER	NORMARIZED AMOUNT	...
0	0	0.000000	...
	1	0.723114	...
	2	0.751858	...
	3	1.000000	...
1	1	0.000000	...
	2	0.156959	...
	3	0.727634	...
	0	1.000000	...
2	1	0.000000	...
	2	0.213788	...
	3	0.708109	...
	0	1.000000	...
:	:	:	:

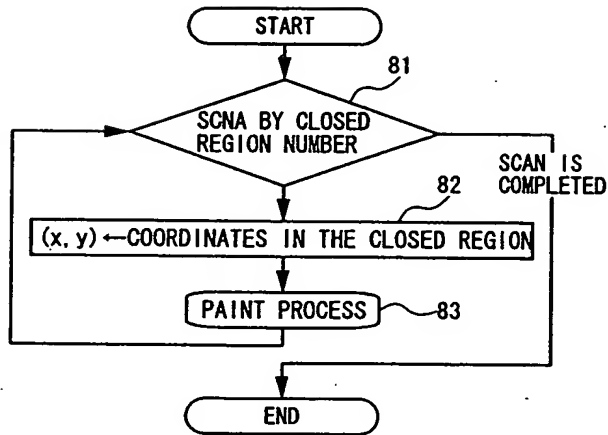
# FIG. 35

LINE DRAWING TO BE FILLED	REFERENCE LINE DRAWING	
	INTEGRATED VARIATION AMOUNT	
CLOSED REGION NUMBER	CLOSED REGION NUMBER	VALUE
0	0	0.000000
	1	4.522894
	2	4.618271
	3	4.678329
1	1	0.093134
	2	1.454905
	3	4.047636
	0	4.735393
2	1	0.006086
	2	0.078106
	3	2.898299
	0	3.320228
:	:	:

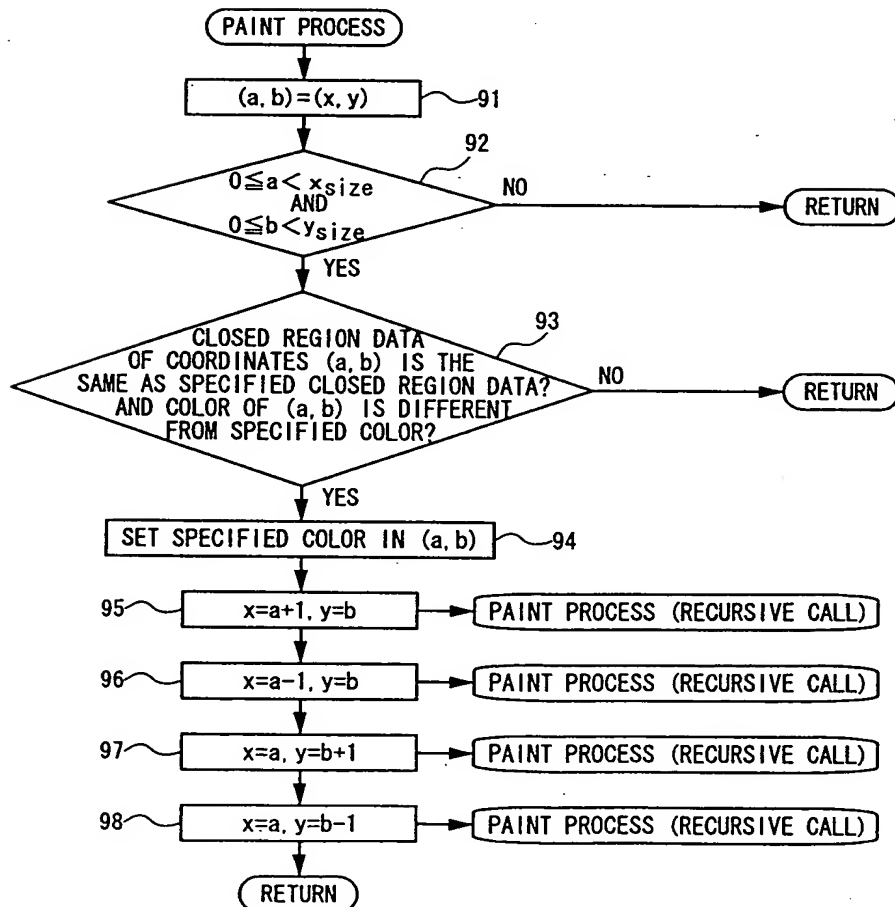
FIG. 36

LINE DRAWING TO BE FILLED	REFERENCE LINE DRAWING		COLOR OF CLOSED REGION CORRESPONDING TO REFERENCE PICTURE	COLOR CANDIDATE LISTS IN WHICH DUPLICATION IS ELIMINATED
	CLOSED REGION NUMBER	INTEGRATED VARIATION AMOUNT		
		VALUE		
0	0	0.00000	249, 194, 194	249, 194, 194
	1	4.522894	254, 0, 0	254, 0, 0
	2	4.618271	254, 0, 0	116, 252, 116
	3	4.678329	116, 252, 116	
1	1	0.093134	254, 0, 0	254, 0, 0
	2	1.454905	116, 252, 116	116, 252, 116
	3	4.047636	249, 194, 194	249, 194, 194
	0	4.735393	254, 0, 0	
2	1	0.006086	116, 252, 116	116, 252, 116
	2	0.078106	254, 0, 0	254, 0, 0
	3	2.898299	254, 0, 0	249, 194, 194
	0	3.320228	249, 194, 194	
:	:	:	:	:

# FIG. 37A



# FIG. 37B



# FIG. 38

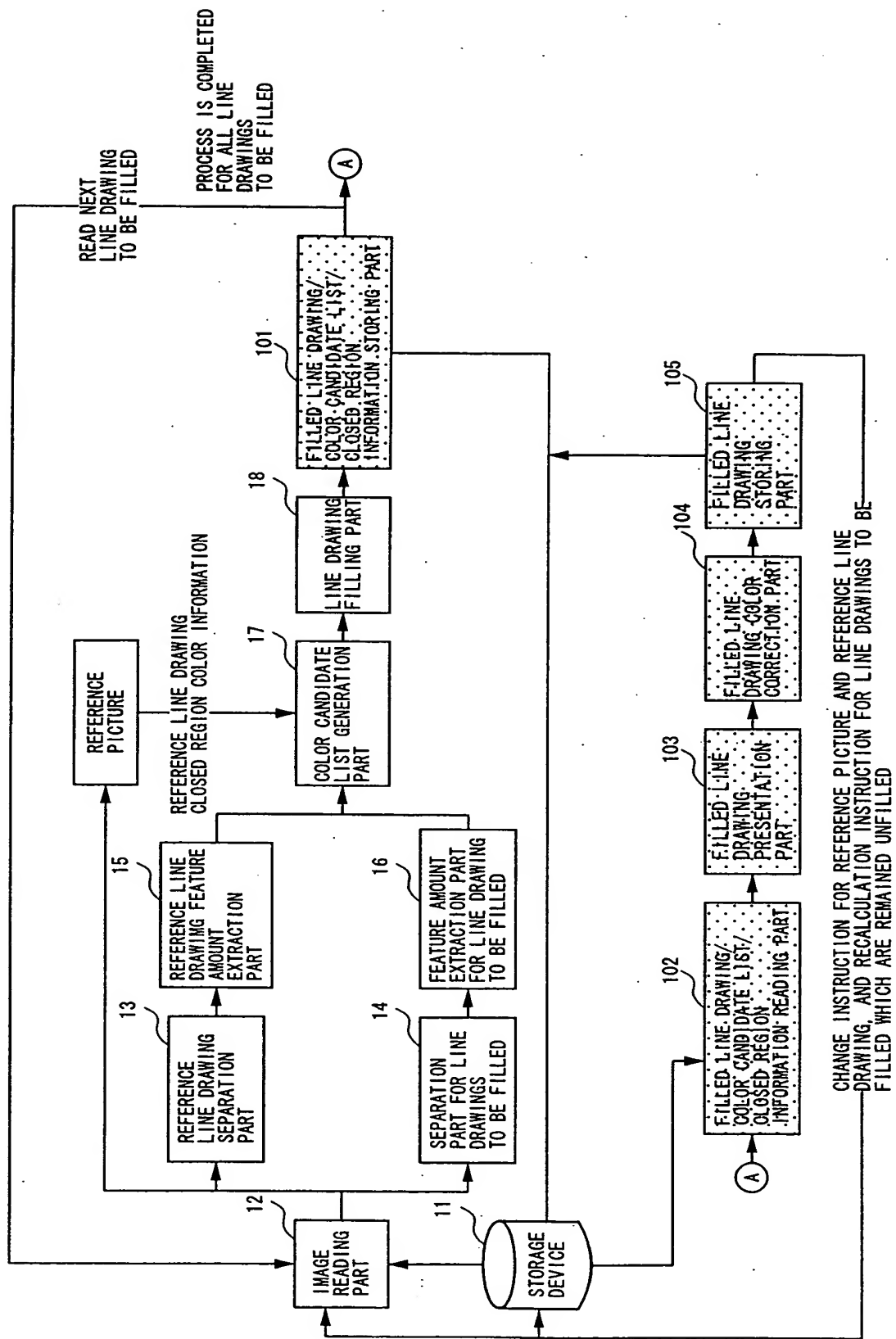
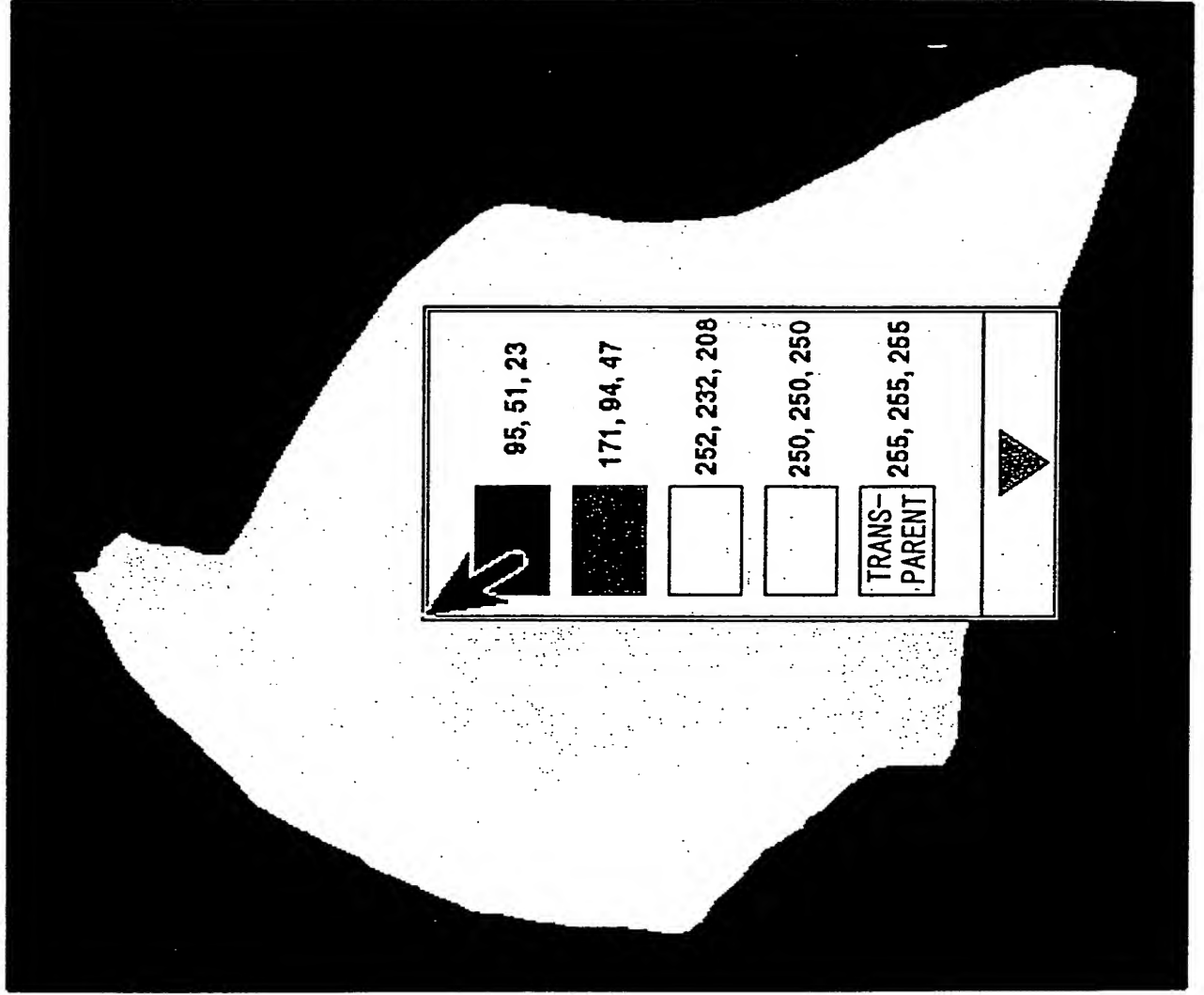


FIG.39



# FIG. 40

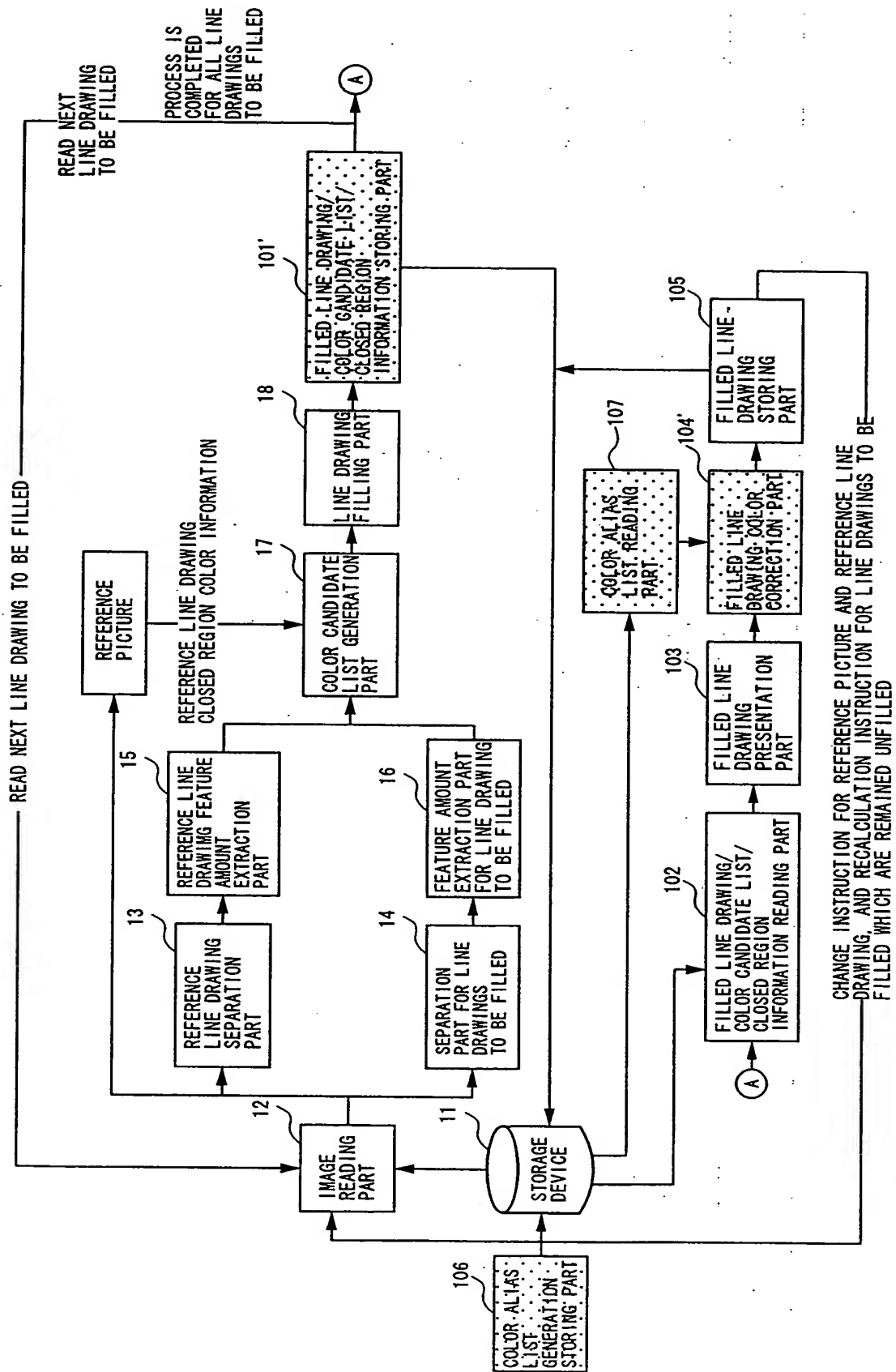


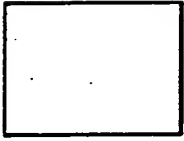





FIG.41

	171, 94, 47	HAIR OF PONTA
	95, 51, 23	HAIR(SHADOW) OF PONTA
	252, 232, 208	FLESH COLOR OF PONTA
TRANS- PARENT	255, 255, 255	I
	249, 32, 63	CRIMSON RED
	250, 250, 250	PURE WHITE
	10, 10, 10	PURE BLACK

**F I G. 4 2**

COLOR (R, G, B)	COLOR ALIAS
171, 94, 47	HAIR OF PONTA
95, 51, 23	HAIR (SHADOW) OF PONTA
252, 232, 208	FLESH COLOR OF PONTA
255, 255, 255	TRANSPARENT
249, 32, 63	CRIMSON RED
250, 250, 250	PURE WHITE
10, 10, 10	PURE BLACK

FIG.43

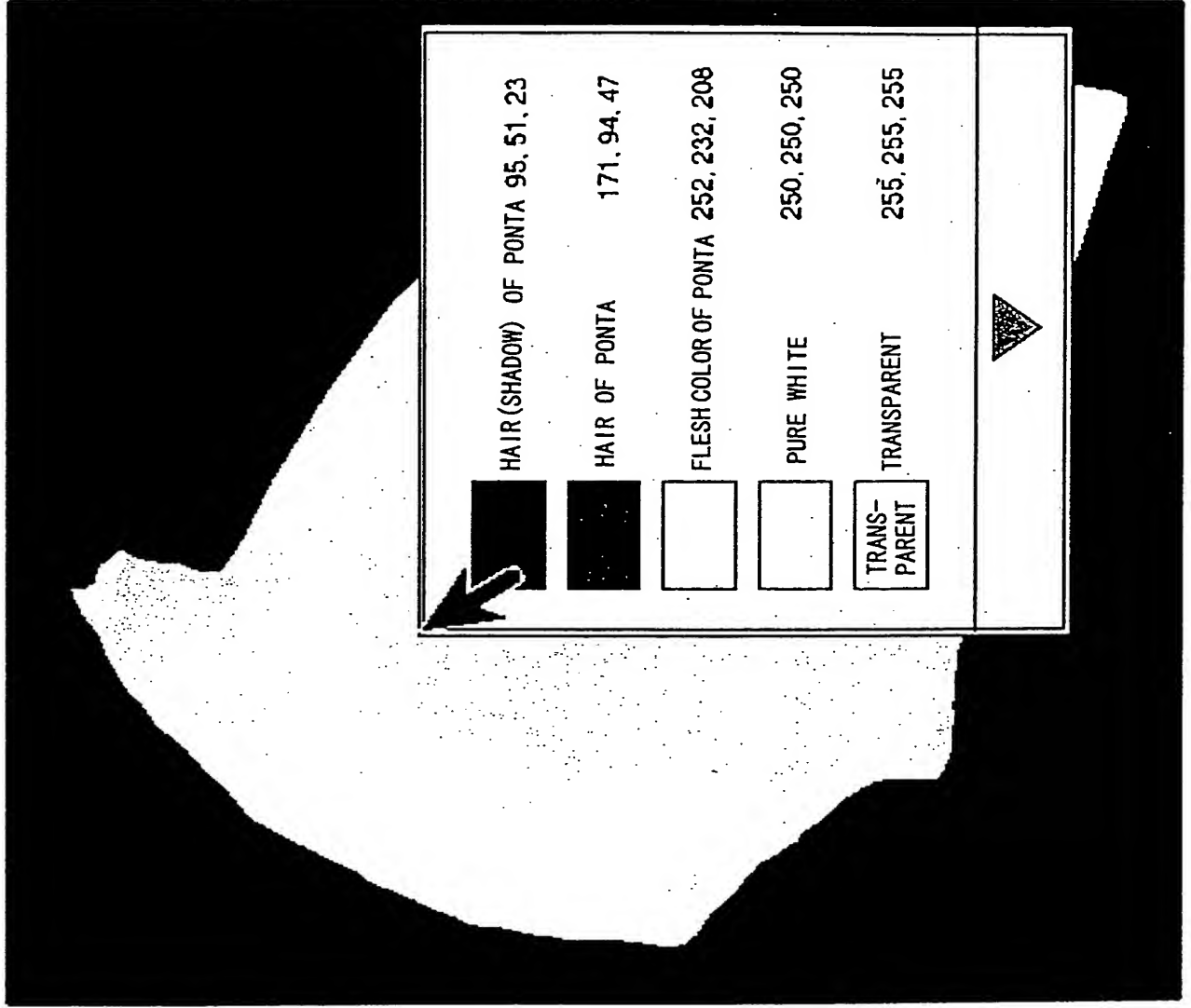


FIG. 44

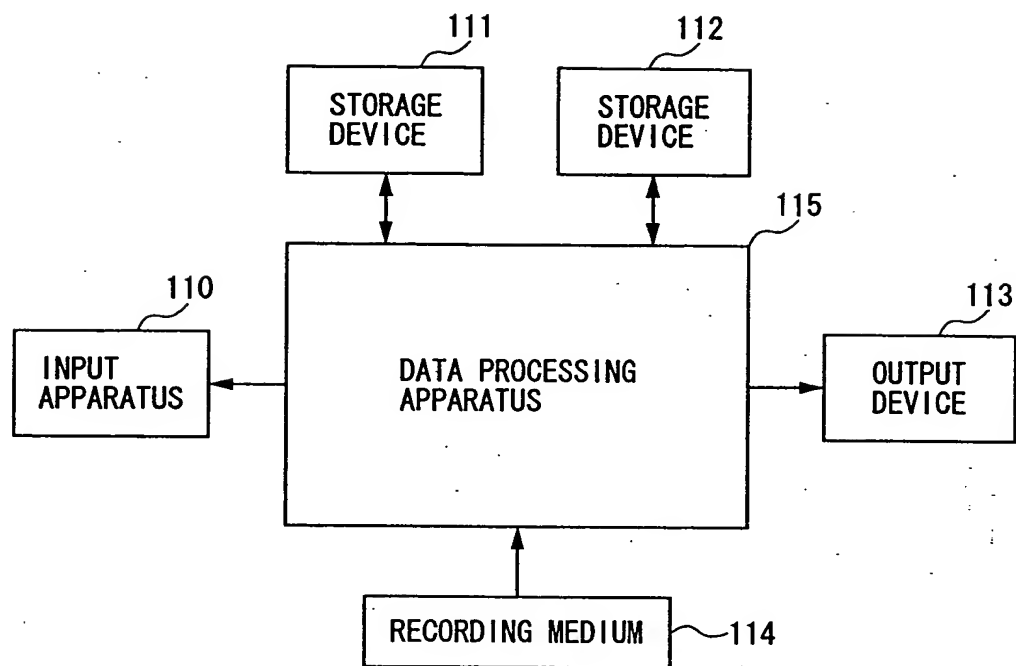


FIG. 45

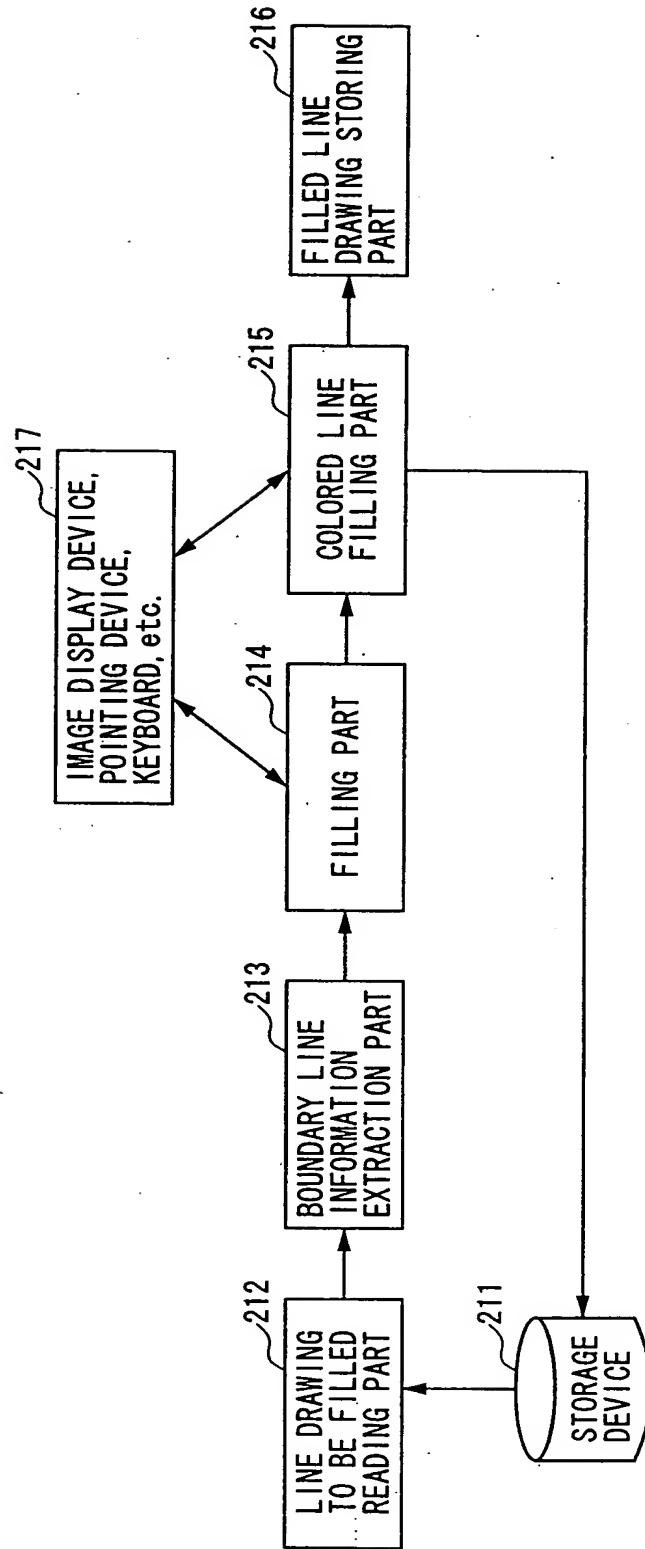
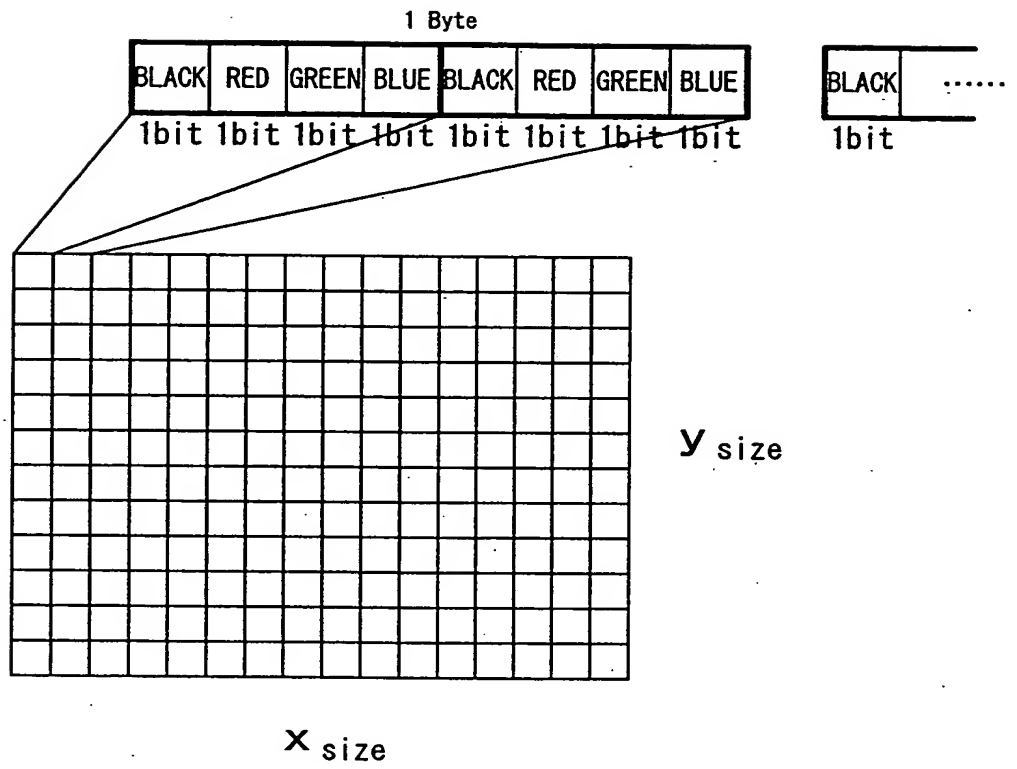


FIG. 46



# FIG. 47

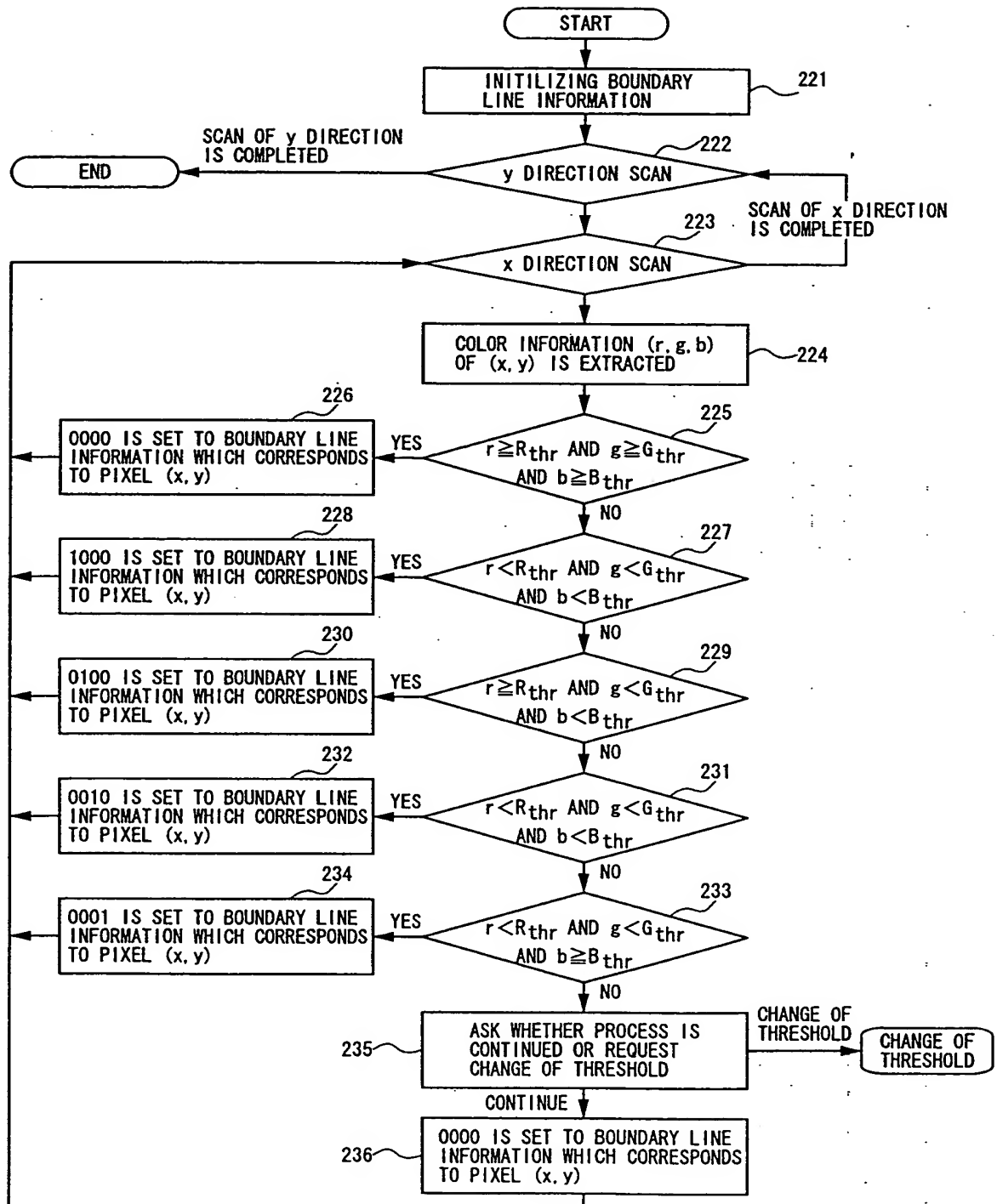
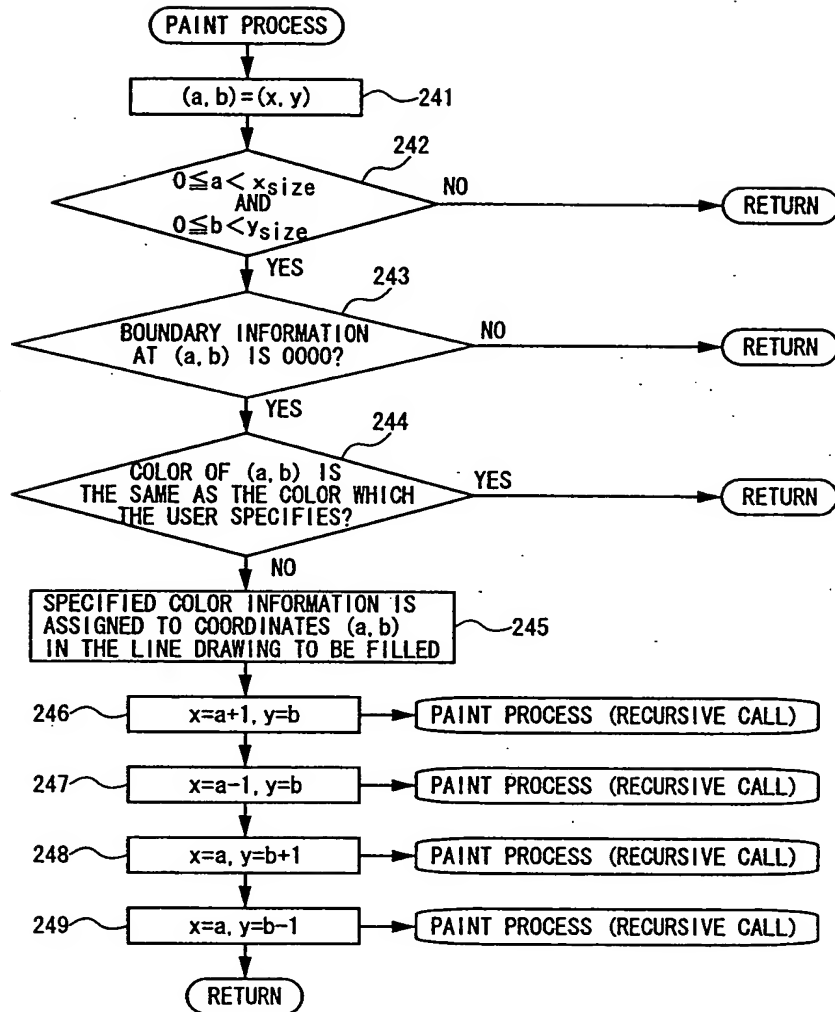
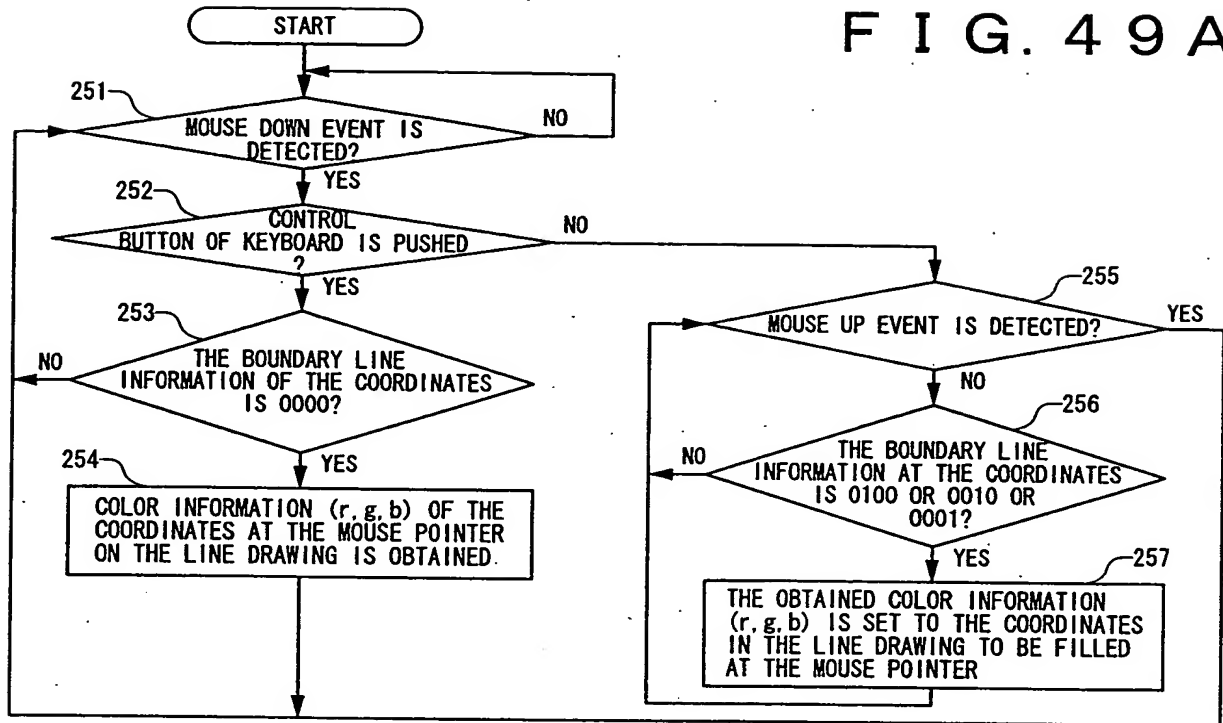


FIG. 48



# FIG. 49A



# FIG. 49B

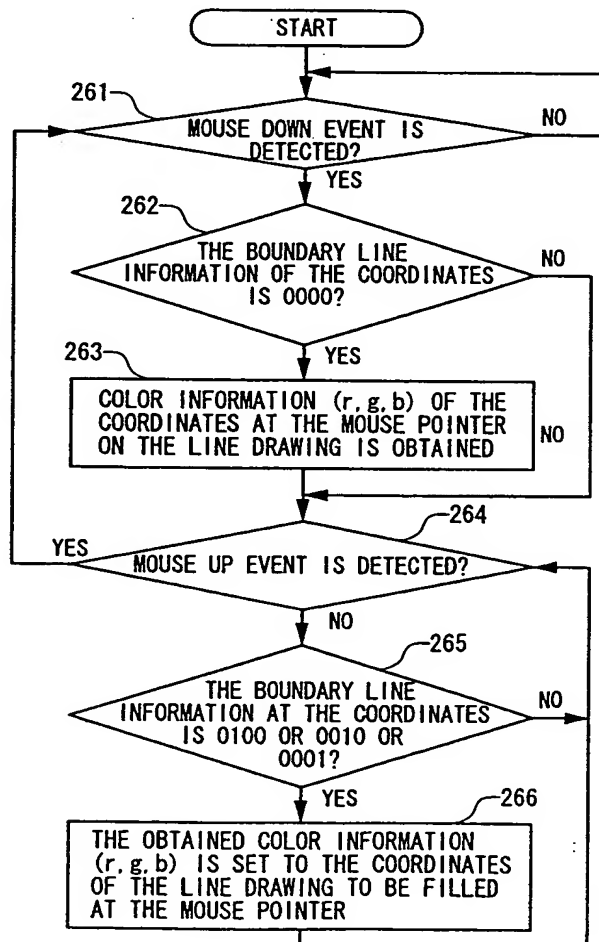
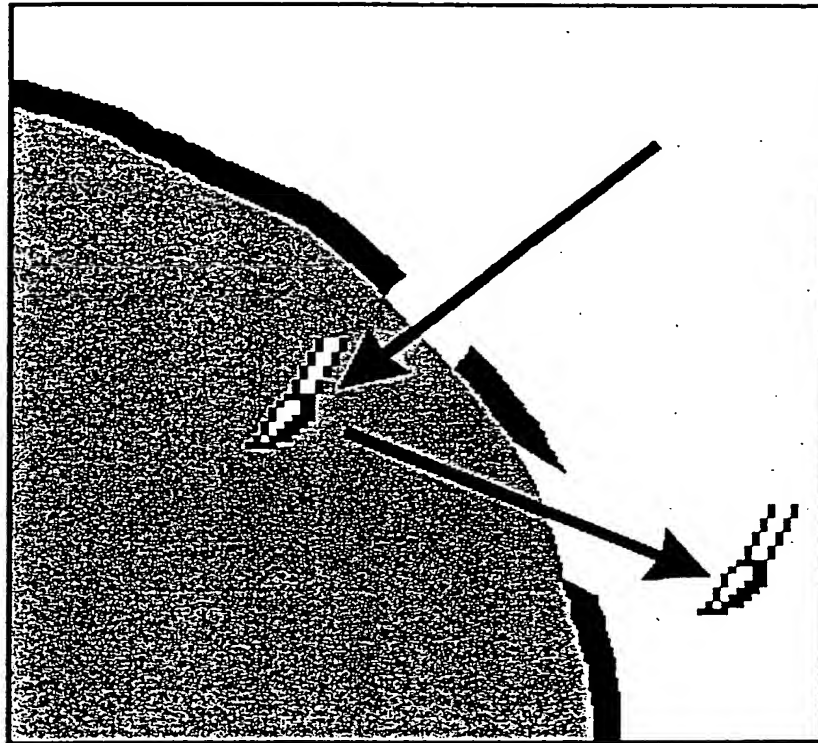


FIG.50



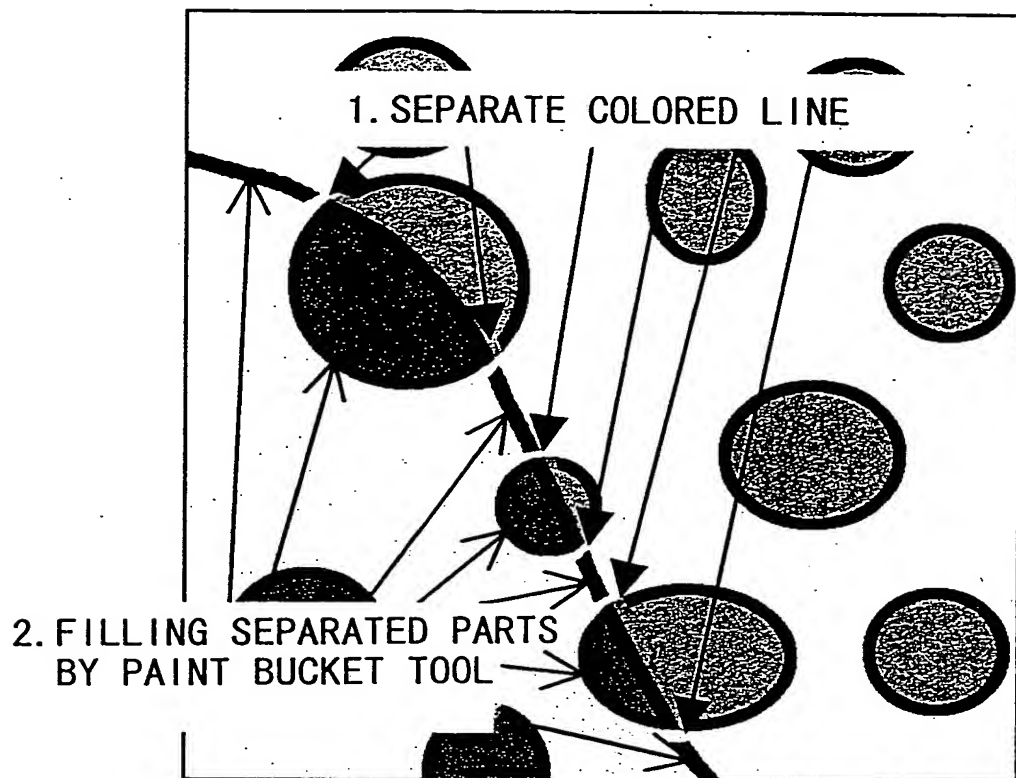


FIG.51A

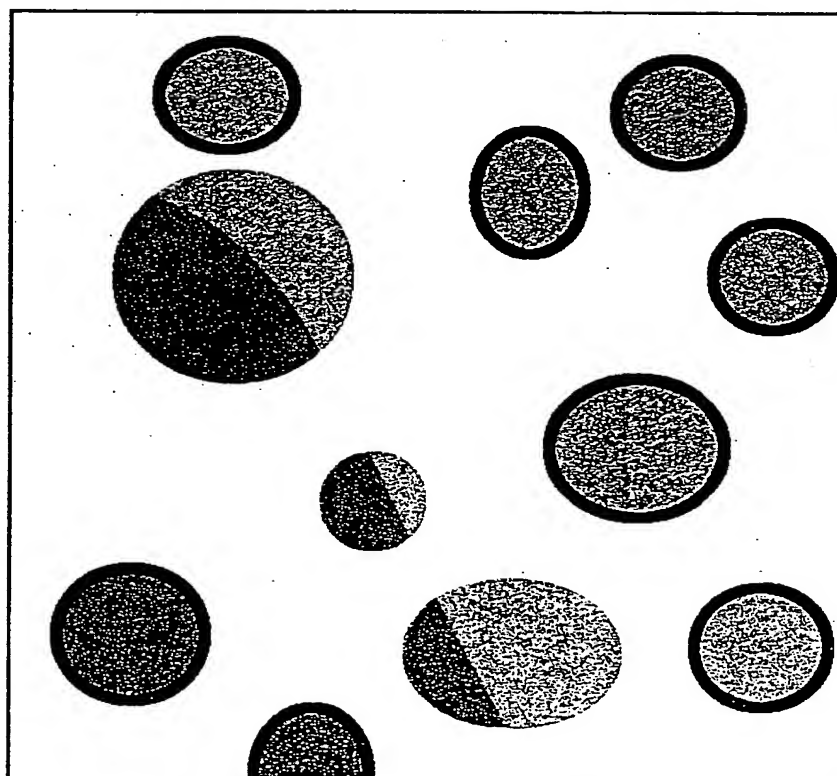


FIG.51B

FIG. 52

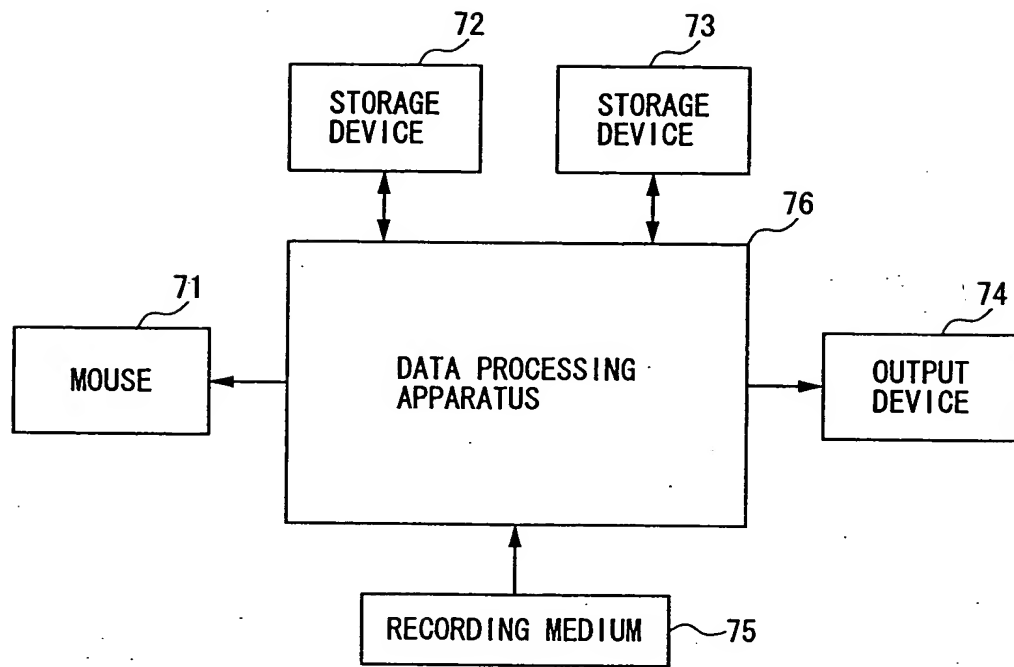
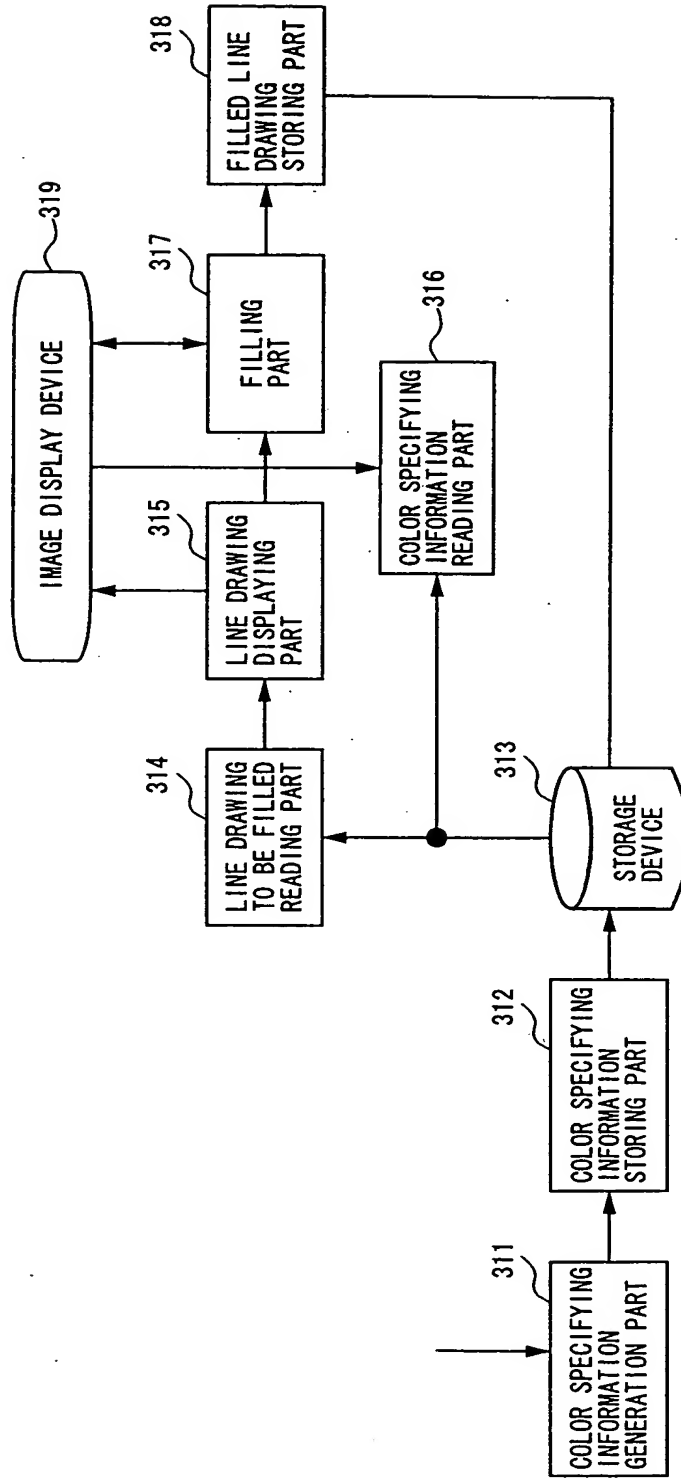


FIG. 53



# FIG. 54

COLOR (R, G, B)	COLOR ALIAS
117, 44, 5	HAIR COLOR 1
87, 14, 10	HAIR COLOR 2
222, 116, 61	HAIR HIGHLIGHT 1
173, 62, 4	HAIR HIGHLIGHT 2
53, 10, 7	HAIR FIRST SHADOW COLOR
23, 2, 1	HAIR SECOND SHADOW COLOR
234, 197, 126	FLESH COLOR
156, 116, 39	FLESH SHADOW COLOR
73, 142, 112	SHIRT COLOR 1
⋮	⋮

FIG. 55

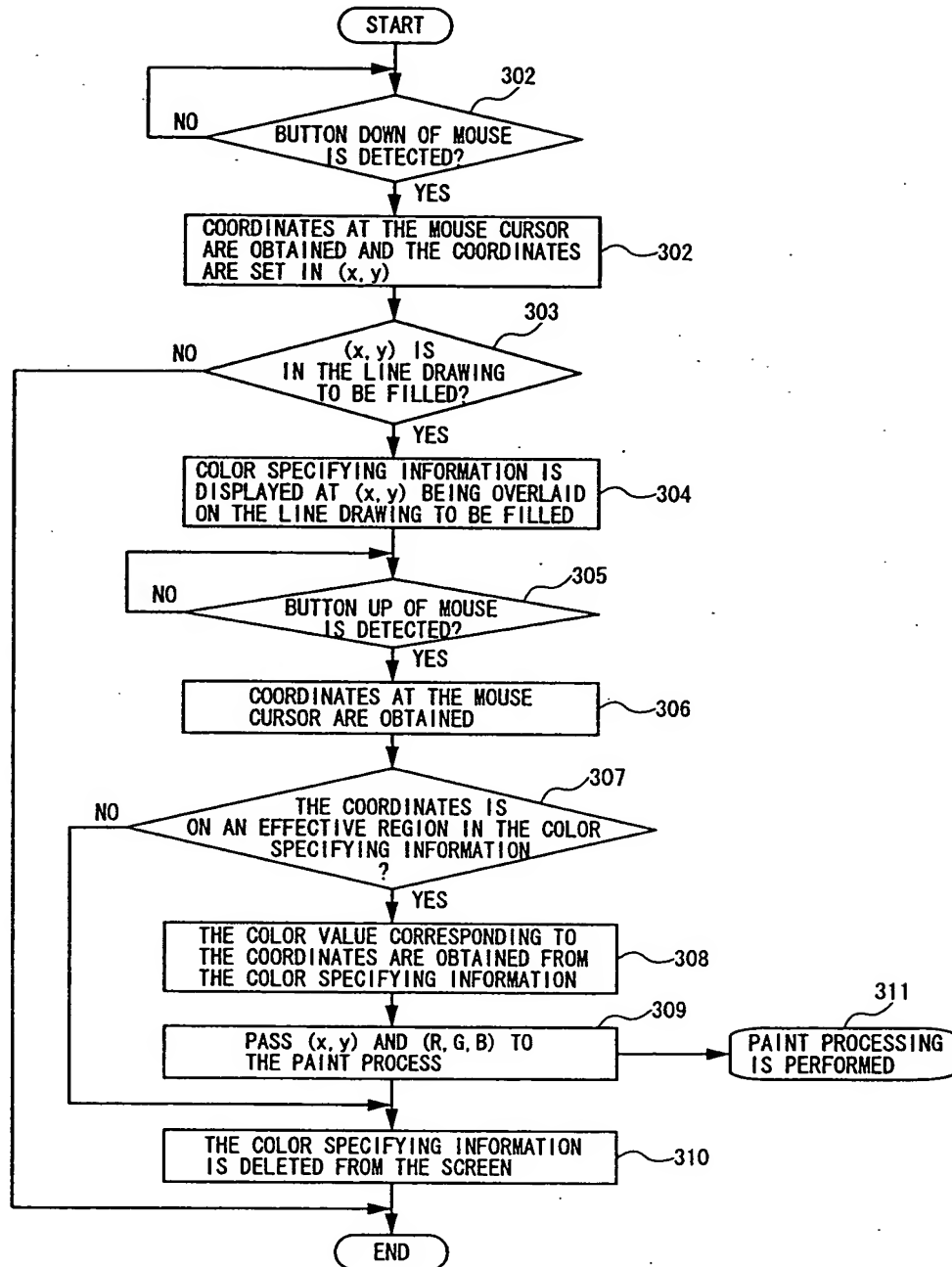


FIG. 56

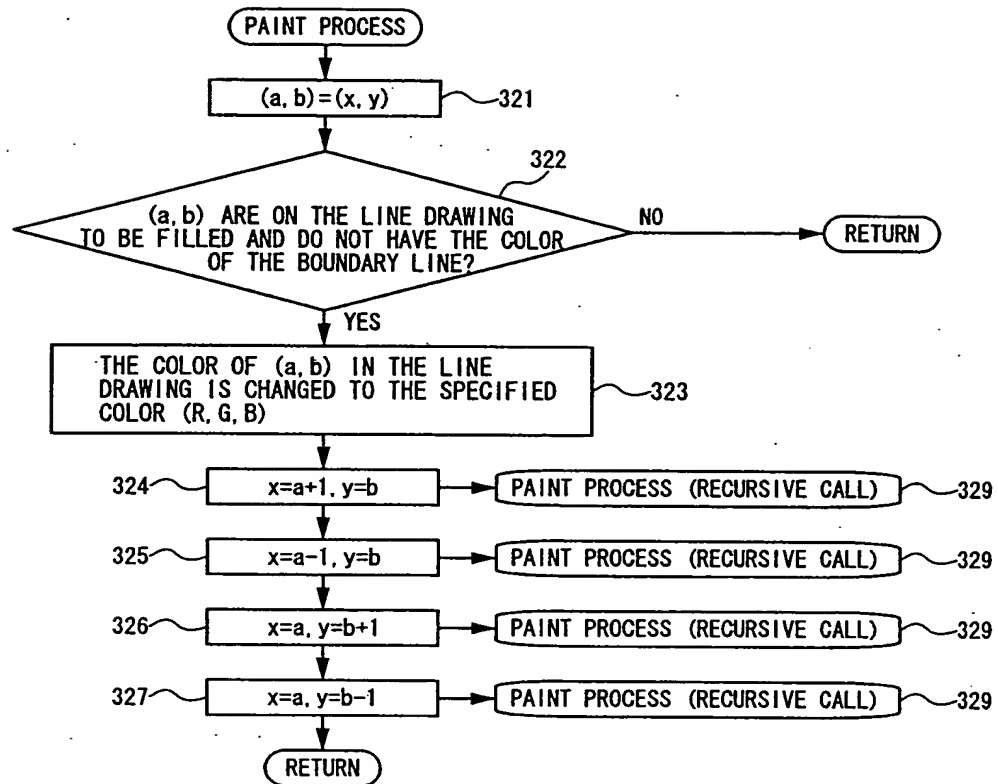


FIG.57A

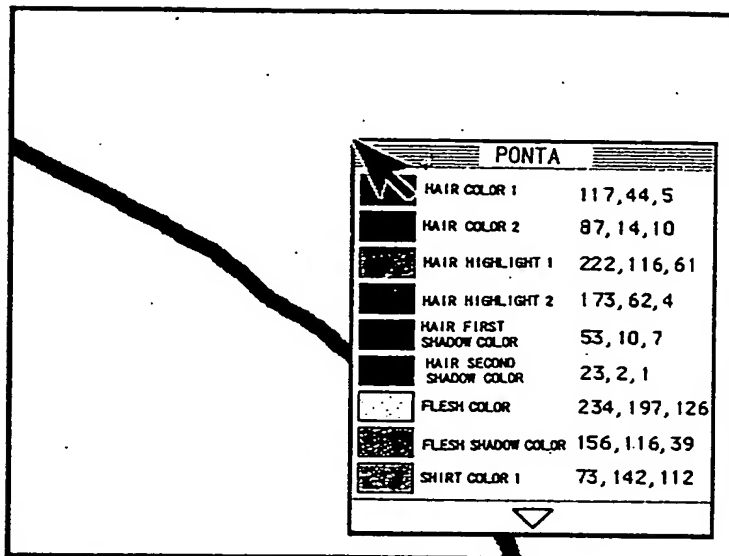
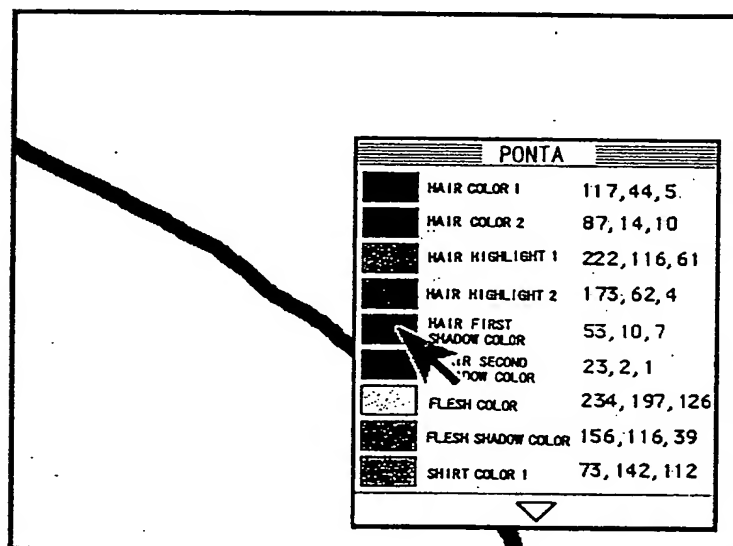


FIG.57B



HAIR FIRST  
SHADOW COLOR

FIG.57C



FIG. 58

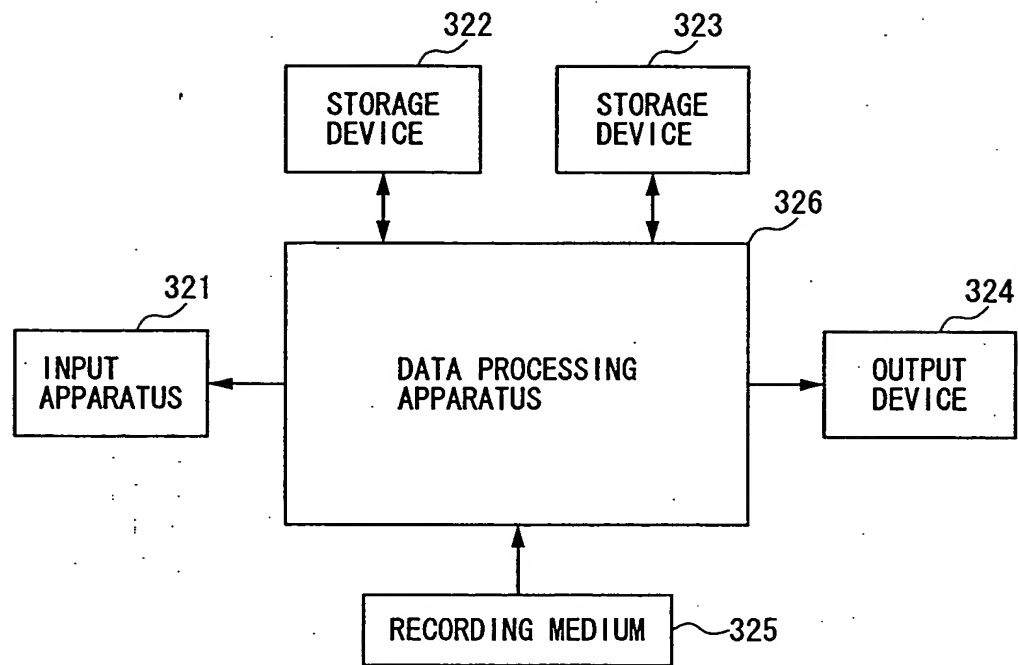
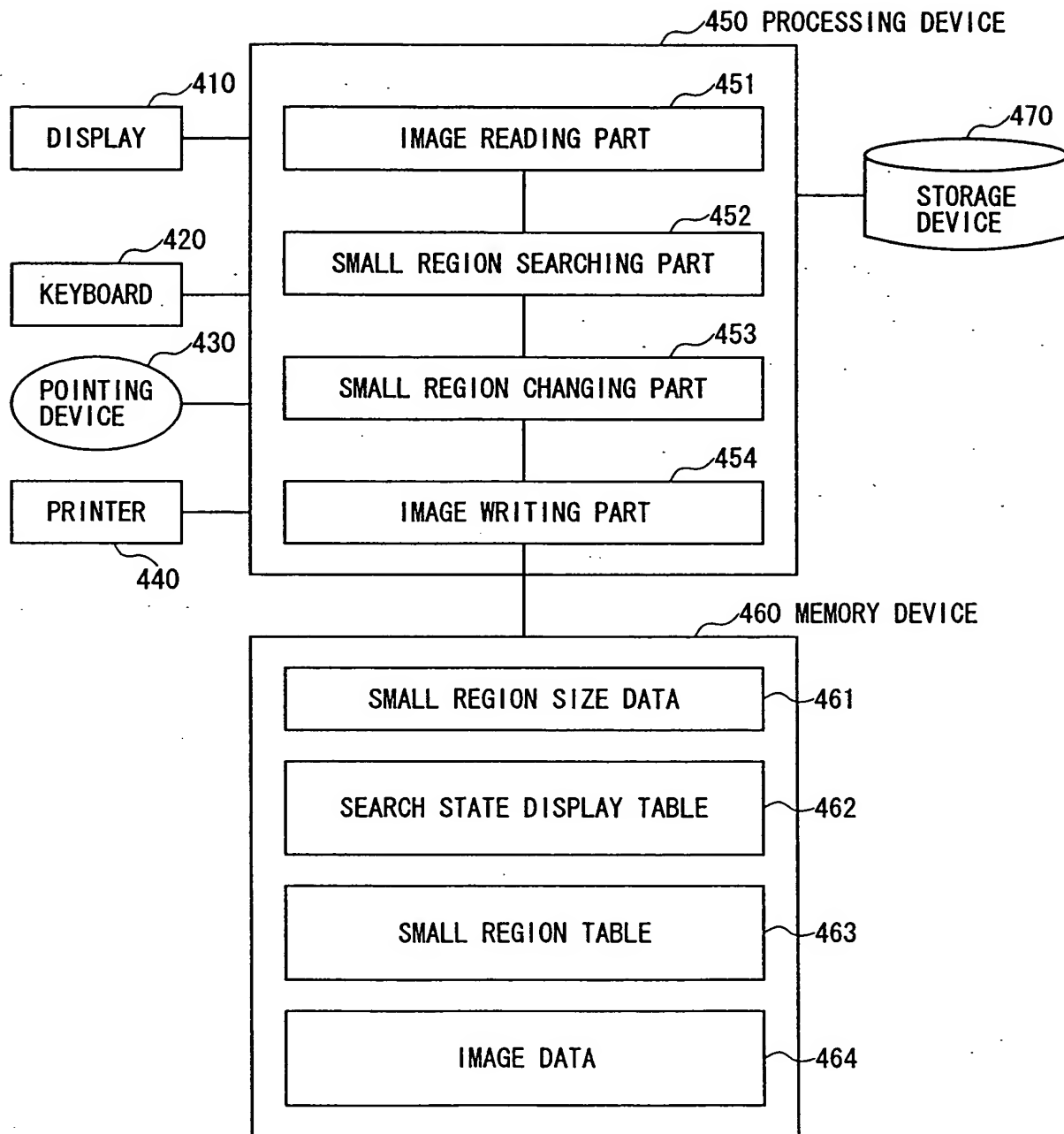


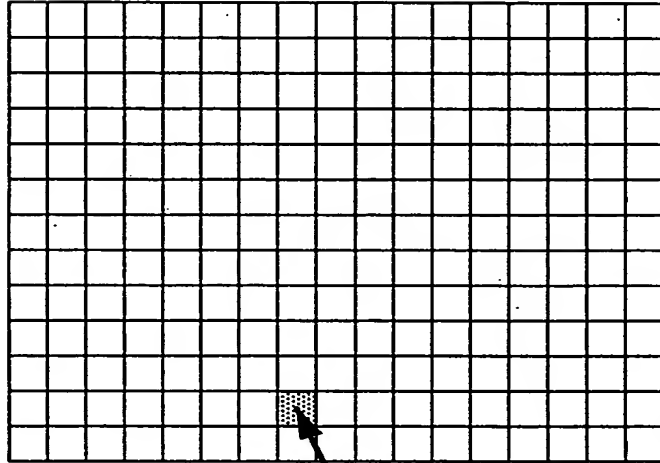
FIG. 59



# FIG. 60

SAME AS PIXEL NUMBER OF X DIRECTION  
OF IMAGE DATA ( $X_{size}$ )

SAME AS PIXEL  
NUMBER OF Y DIRECTION  
OF IMAGE DATA ( $Y_{size}$ )



HAVING UNSEARCHED OR SERCHED STATE

# FIG. 61

SMALL REGION NUMBER			COUNT
NUMBER	SIZE	COORDINATES	CHANGE STATE
0	num[0]	x[0], y[0]	0
1	num[1]	x[1], y[1]	0
2	num[2]	x[2], y[2]	0
3	num[3]	x[3], y[3]	0
4	num[4]	x[4], y[4]	0
5	num[5]	x[5], y[5]	0
6	num[6]	x[6], y[6]	0
7	num[7]	x[7], y[7]	0
8	num[8]	x[8], y[8]	0
⋮	⋮	⋮	⋮
⋮	⋮	⋮	⋮

# FIG. 62

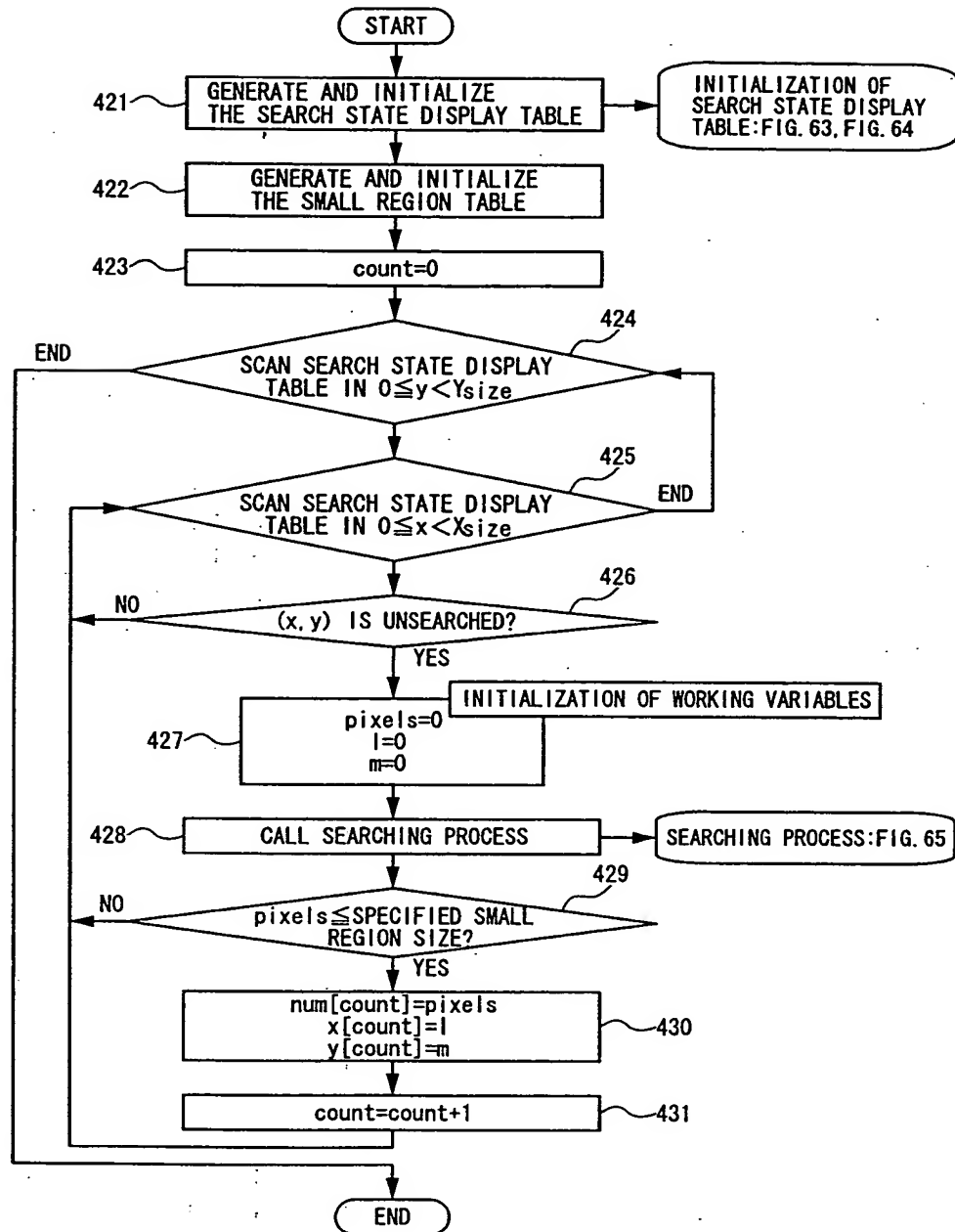


FIG. 63

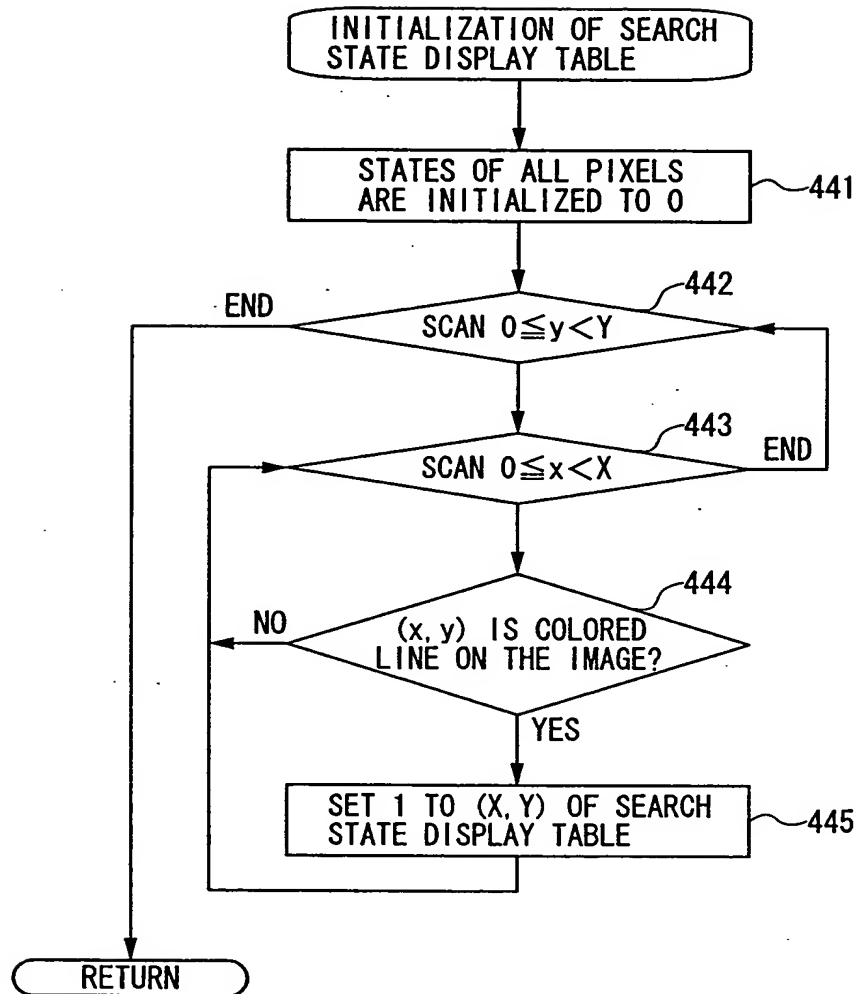


FIG. 64

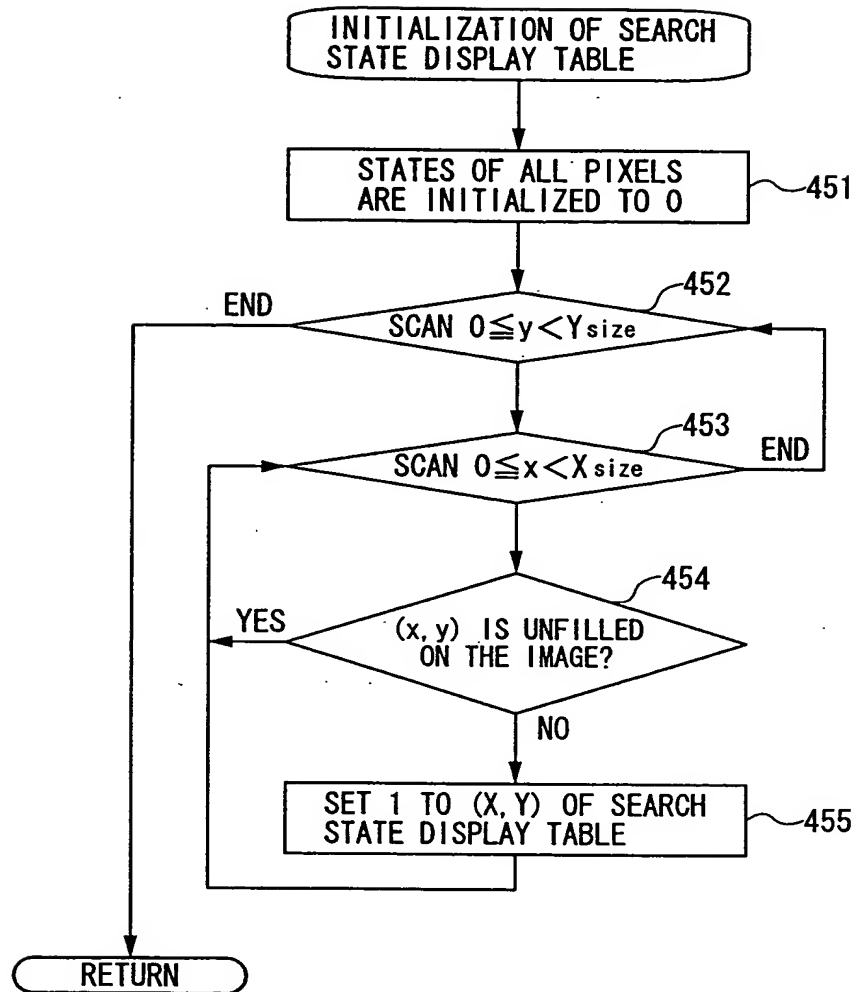
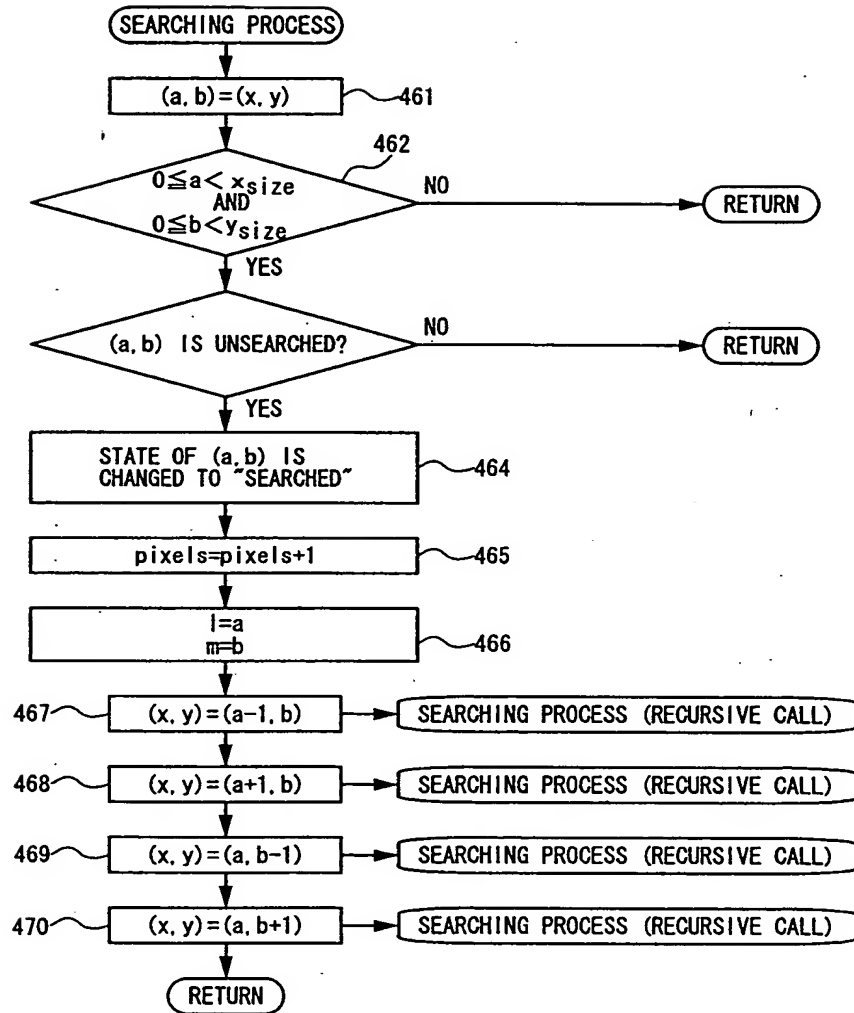


FIG. 65



# FIG. 66

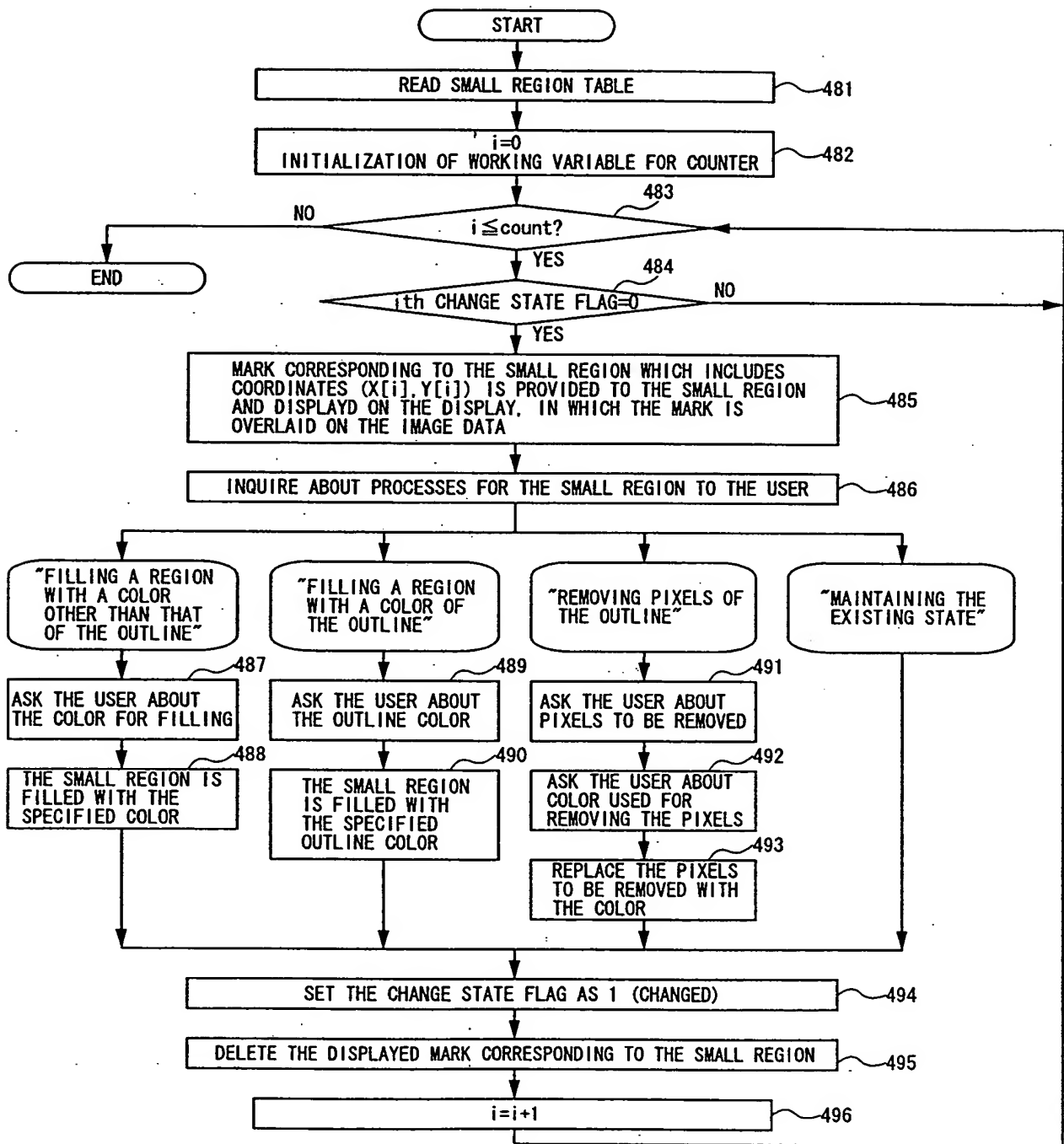


FIG.67A

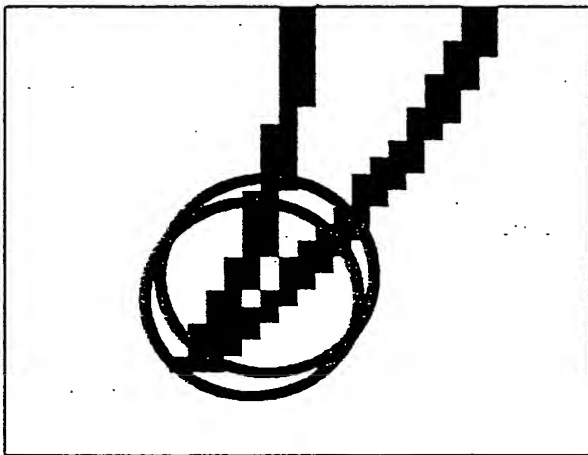


FIG.67B

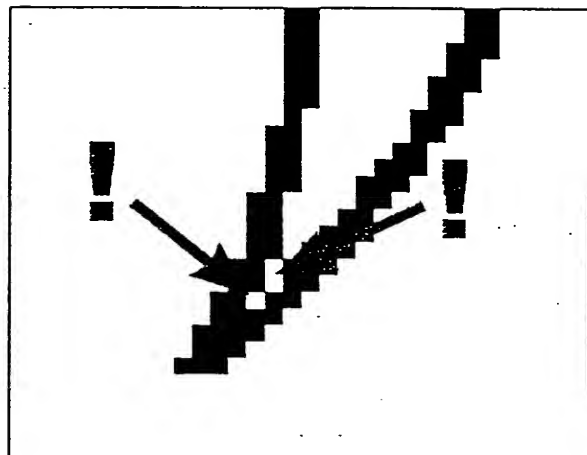


FIG.68

